

**School of Education**

**Efficacy of teachers' semi-focused written corrective feedback on learners'  
linguistic accuracy and writing fluency**

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## **Declaration**

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgment has been made. This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

**Human Ethics** The research presented and reported in this thesis was conducted in accordance with the National Health and Medical Research Council National Statement on Ethical Conduct in Human Research (2007) – updated March 2014. The proposed research study received human research ethics approval from the Curtin University Human Research Ethics Committee (EC00262), Approval Number # HRE2018-0580

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## Abstract

This thesis examined the effects of teachers' direct semi-focused written corrective feedback (WCF) on a group of Sri Lankan second language (L2) learners' written accuracy and writing fluency. The research was undertaken in five intact classrooms in a Sri Lankan university context. The quasi-experimental study involved students in four treatment groups: (1) received WCF on linguistic errors and an opportunity to revise (WCF + R, N = 30); (2) received WCF on linguistic errors and then discussed the corrections in pairs (WCF + D, N = 31), (3) received feedback on organisation and content with opportunity to revise (CON+R, N = 32), and (4) received feedback on organisation and content with opportunity to discuss comments in pairs (CON+D, N = 31). A control group received no WCF or opportunity to revise/ discuss (N = 30). All of the participants completed ten problem-solution writing tasks, one each week over a period of 10 weeks. The WCF given by teachers focused on three types of local errors, namely errors in articles, finite verbs, and prepositions. In addition, the participants completed a short questionnaire after each writing task. There was also an exit questionnaire that examined the students' perceptions towards WCF, and the revision/ peer discussion procedures.

The first aim of the study was to explore the students' perceptions towards teacher feedback and the revision/ peer discussion procedures using data from the Exit questionnaires and audio-recorded interviews. The two WCF groups were more positive about the feedback they received than the two groups that received content comments. The students also viewed the opportunity to revise individually as more advantageous than the opportunity to discuss in pairs.

The second aim of the study was to investigate the effects of teacher feedback on linguistic accuracy. To this end, I first examined the students' use of finite verb constructions in their initial and revised drafts of each writing task. Both the WCF+R and CON+R groups improved in accuracy with the group that received WCF showing greater gains in accuracy than the group that received content comments. Second, I examined whether the effects of feedback (WCF and content feedback) were also evident in new writing tasks. Both feedback groups outperformed the control group from task 3 onwards. Thus, the results showed that feedback, especially corrective feedback, led to improved accuracy in finite verb constructions in both revised texts and new texts. Third, I investigated what effect allowing students to

keep their corrections following WCF when they completed a new task had on accuracy scores in the new task. Half of the WCF+R group kept their corrections whereas the other half did not. There was no statistically significant difference between these sub-groups.

The third aim of the study was to compare the effects on linguistic accuracy in finite verb constructions of two ways of responding to the corrections – by revising individually or by discussing the corrections in pairs. The results showed that while both the WCF+R and WCF+D groups performed better than the Control group over time, the WCF+R group improved more than the WCF+D group, indicating an advantage for individual revising over peer discussion.

The fourth main aim of the study was to investigate whether the feedback (i.e. WCF or content feedback) had any effect on writing fluency (i.e. the number of words produced by learners in each task) in both their revised drafts and in new writing. The results showed that both the CON+R and WCF+R groups produced longer revised texts with the CON+R group's texts significantly longer than the WCF+R group's. Neither type of correction had any negative effect on the length of texts in new tasks, thus failing to support Truscott's (1996) claim that WCF impacts negatively on writing fluency.

Finally, I examined whether task complexity mediated the effect of feedback on written accuracy. This was achieved by examining whether accuracy scores of the ten tasks differed according to the students' ratings of how difficult they found each task and whether they were familiar with the task topics. The groups' rating of the tasks varied markedly. There was greater accuracy evident in those tasks that they had rated as 'easy/familiar'. Similarly, all the groups produced longer texts in the 'easy/familiar' than in the 'difficult/ unfamiliar tasks'. Thus, task complexity was found to mediate the effect of the feedback in all the groups although this effect was minimal in the group that revised following WCF.

Overall, the results of the study show that direct semi-focused written corrective feedback with opportunity to revise is most likely to lead to improved linguistic accuracy over time without any negative impact on writing fluency. The implications of the study for achieving an ecologically valid approach to providing corrective feedback are discussed in the conclusion.

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### List of Abbreviations

ANOVA	Analysis of Variance
adv	Adverb
adj	Adjective
CF	Corrective Feedback
CON+R	Content Feedback with Opportunity to Revise
CON+D	Content Feedback with Opportunity to Discuss Errors in Pairs
DCF	Direct WCF
DWCF	Dynamic Written Corrective Feedback
FFI	Form-focused Instruction
EFL	English as a Foreign Language
ELT	English Language Teaching
ESL	English as a Second Language
HREC	Human Research Ethics Committee
IL	Interlanguage
L1	First Language
L2	Second Language
LMS	Learning Management System
ME	Metalinguistic Feedback
prep	Prepositions
S	Student
SD	Standard Deviation

SLA	Second Language Acquisition
sp	Spelling
T	Task
TBLT	Task Based Language Teaching
TL	Target Language
v	Verb
WC	Word Count
WCF	Written Corrective Feedback
WCF+D	Written Corrective Feedback with Opportunity to Discuss Errors in Pairs
WCF+R	Written Corrective Feedback with Opportunity to Revise

## **Chapter 1 Introduction**

This thesis reports a study that examined the effects of teachers' direct semi-focused WCF that involves correcting selected (three to six) local errors rather than all the errors) on the written accuracy of groups of Sri Lankan second language (L2) learners. The study involved first-year students of English in a Sri Lankan state university. This chapter will discuss the personal and theoretical rationale for the current study. First, I will present a general overview of the education system in Sri Lanka. Second, I will discuss what motivated me to pursue this study by giving a brief account of my experience as a teacher. Third, I will briefly introduce the theoretical basis for this research before finally providing a brief overview of the contents of each chapter.

### **1.1 English Language Education in Sri Lanka**

It has been almost seven decades since English was declared a second language in the Sri Lankan school curriculum. It is taught as a second language from primary to secondary education in state-run schools and other private schools where the government syllabus (syllabus prepared by the National Institution of Education) is used. It is a compulsory subject for both the General Certificate in Education – Ordinary Level (G.C.E. (O/L)) and General Certificate in Education – Advanced Level (G.C.E. (A/L)). At the tertiary level all students are required to pass the compulsory English examination without which they cannot matriculate.

Although much effort has been made through various educational reforms to make English education available and accessible to all students, the system has failed to maintain a balance of the four skills of language – listening, reading, speaking, and writing. In relation to testing and evaluation, at both the secondary and tertiary levels, much weight is placed on the improvement of writing skills. Evaluation of speaking and listening skills is carried out through continuous assessment.

However, what is noteworthy is that, although students are taught English from primary to tertiary level, most of the students find English to be challenging and difficult (De Mel, 2007; (Wijesekera, 2012). Despite the teachers' dedication and the students' interest in mastering the language, only a minority of the student population is able to pass the G.C.E. –

Ordinary Level Examination. In fact, the fail rate has been more than 50 percent (Department of Examinations, 2015).

Although several efforts have been made to improve English language teaching, there is a consensus that they have not succeeded (Aloysius, 2015). This failure can be explained by a number of factors - the lack or/and uneven distribution of resources and facilities (Hettiarachchi, 2010), socio-economic and political problems (Karunaratne, 2008), affective factors (Pereira & Senaratne, 2019), teaching efficacy, the focus of evaluation, the mismatch between teaching and testing, lack of professional development for teachers and lack of exposure to research. As a result, students fail to produce grammatically accurate writing at the tertiary level.

Writing is one of the most valued skills in university education. One reason for this is because the students are expected to improve their language skills to pursue their academic courses through the medium of English in their respective faculties. Therefore, there is a great emphasis on improving students' writing skills. The students' performance in English is measured by tests, with 70% of marks allocated to writing and reading. Therefore, grammar instruction, and providing feedback on students' writing, figure as the major foci in English language teaching in tertiary education in Sri Lanka.

Writing, of course, involves much more than linguistic accuracy (e.g. organization; register; content). However, my focus was on linguistic accuracy in students' writing as in previous research on WCF which is seen as a way of fostering language acquisition in general, not just writing. In other words, one possibility is to tackle students' problems with grammar at the tertiary level through the provision of written corrective feedback on their writing. This points to the importance of providing WCF on students' writing. Hence, the focus of the study reported in this thesis is of great value and contributes to English language learning in Sri Lanka. The current study, therefore, examines the effect of WCF on linguistic accuracy when students complete writing tasks.

## **1.2 Personal Motivation for the Study**

The initial motivation to pursue this study emerged from my personal experience as a second language teacher in a state university in Sri Lanka. I started my teaching career as a school-teacher and found myself teaching English to primary and secondary level students in

a very rural school for two and half years. Although I had doubts about some of the teaching methods and approaches used to teach writing in the school curriculum, I was not free to try out my own teaching methods and approaches. This was because I had to follow the mandated textbook which offered exam-oriented and teacher-centered lessons. During this time, I was curious about how best grammar can be taught to maximize opportunities. I remember the frustration I felt when I could not execute what I thought would be best practice in my classroom because I was constrained by the need to complete the syllabus within a limited time. The curriculum did not include communicative language teaching which provided students with opportunities to use their language orally and in writing. At this time, I was not aware of task-based language teaching or the importance of written corrective feedback. Grammar was taught as a set of discrete rules and highly controlled practice exercises, i.e. drills, filling the blanks, and writing short paragraphs.

My desire to study L2 teaching led me to do my MA in Linguistics in Kelaniya University, Sri Lanka. However, I do not think this MA had much influence on how I thought about language teaching. I was at that time offered a teaching position at the Department of English Language Teaching of the University of Sri Jayewardenepura where I had graduated. This was a major turning point in my professional life. It brought me into contact with experienced teachers and teacher educators in the ELT field. I was also given the autonomy to be creative with my own innovative ideas in class.

Writing is viewed as an important skill by both the students and administrators alike. During this time, I began to take seriously the need for WCF. All the teachers in the programme believed that it was necessary to provide feedback on students' writing. However, there were a number of disagreements regarding how to carry it out. For one thing, the teachers held different and conflicting opinions about how WCF could best be provided in the classroom. Such conflicting attitudes towards feedback stemmed in part from not having had the opportunity to learn about what research has shown about WCF. Most of the teachers, myself included, lacked an understanding of the options available to them in giving feedback.

Second, the Department did not have a clear policy for feedback practice. As a result, teachers had their own individualised ways of providing WCF to students. Corrections were highly unfocused – in part because the students expected teachers to correct all of their errors



and in part because the teachers believed that errors would be internalised if they were ignored. I however, realized that correcting all the errors was impractical and overwhelming.

Third, in spite of the corrections, the teachers noticed the reoccurrence of grammatical errors in students' writing. I recall the disappointment I and my colleagues felt when we found that the students continued to repeat the same errors we had corrected. Fourth, frequent provision of WCF was tedious and time-consuming for teachers as they had to focus on other aspects of language in the classroom. Therefore, feedback sessions were provided on only a limited number of writing assignments. Another problem I noticed was that irrespective of the students' proficiency level, the teachers just indicated that an error had occurred (i.e. indirect WCF). Generally, these problems with giving feedback are encountered by language teachers in universities throughout Sri Lanka.

I have found that one of the most challenging issues in teaching writing is finding an optimal method for treating errors. There were however weekly staff discussions to discuss the policy for handling WCF where we reflected upon issues that we encountered during writing lessons. We considered different ways of implementing WCF and tried these out. One way involved asking students to maintain a weekly journal which we read, correcting their errors. However, this was not successful as the students tended to just copy their previously written sentences rather than attempting new sentences. Another project involved process writing. The students were asked to write a short essay on a given topic, they exchanged their first draft with a peer and carried out peer correction before revising their drafts. The process was then repeated with another student leading to a third draft. At this point, the teacher corrected the errors in the third draft. I found that asking students to attend to their own errors and producing multiple drafts was somewhat beneficial. However, as the students only completed three writing tasks over the semester, there was insufficient evidence to show whether they benefited from the WCF over time. I realized that students needed to be given more writing tasks.

I tried different ways of providing WCF. For example, I focused my correction on just one or two linguistic features in my students' writing. However, I was not able to systematically investigate the effectiveness of this approach because I had to teach three classes alternatively with three other teachers. During this time, one of my friends started her research project on error correction and asked for my assistance. She examined whether the

students' mother tongue was a factor in the reoccurrence of errors in their writing. However, this study did not focus on the immediate problems that university language teachers encountered in providing WCF. I found myself more concerned with how to address this problem as both the English department and the university placed great weight on writing accuracy.

Overall, both the secondary and tertiary education in Sri Lanka place a greater weight on students' writing skills. They will have received direct grammar instruction throughout their schooling, but this has failed to guarantee their ability to write without making grammatical errors. This points to the need to review the instructional methods used. One possibility is to tackle students' problems with grammar at the tertiary level through the provision of feedback on their writing. I began to see that the only way to solve the problems I and my fellow teachers had experienced when providing WCF was to conduct a systematic study to investigate the effects of WCF when students completed a series of writing tasks.

Hence, the key idea that informed my doctoral thesis grew out of my personal experience as a language teacher. I wanted to investigate whether WCF is effective and if so, how it should be carried out to maximize its benefits in my classroom. With the guidance of my supervisors, I decided to investigate the effect of teachers' semi-focused WCF on learners' linguistic accuracy and writing fluency over a whole semester when they completed ten writing tasks.

### **1.3 Theoretical Approach**

My research was informed by theories that underlie second language acquisition (SLA). Addressing the question of whether corrective feedback facilitates second language acquisition, Schmidt (1994; 2001) and Ellis (1995) claimed that WCF works by causing learners to make a 'cognitive comparison' (i.e. notice the gap) between their own language production (i.e. interlanguage) and the teacher's input (i.e. target language). This 'cognitive comparison' helps learners to develop an understanding of the underlying rules that can be used to construct new instances of the feature. In addition, revision following corrective feedback also provides opportunities for learners to actively engage in cognitive comparison leading to 'pushed output' (Ellis 2010). Thus, revision can be viewed as a facilitator of feedback uptake.

However, WCF became a controversial issue with Truscott (1996, 1999, 2001, 2004, 2007, 2009, 2010) disputing the value of WCF in a series of his publications. Truscott (1996) claimed that grammar correction has no effect and therefore should be abandoned. Ferris (1999) questioned the validity of Truscott's argument claiming that if WCF was "selective, prioritized and clear" (p. 4), it has value. However, Ferris pointed to the need of further research to investigate the effectiveness of WCF as she acknowledged that existing studies were limited in a number of ways. Truscott (1999) responded to Ferris claiming that the weaknesses in WCF studies made their findings invalid. After reviewing studies cited by Truscott, Ferris (2004) made recommendations for future WCF research. The key research question she identified was "Does error feedback help L2 student writers?" (2004, p. 50). Ferris also suggested the need for longitudinal studies that examine whether WCF leads to improvement in accuracy improvement over time and the investigation of the role of revision on written accuracy. She also suggested that researchers should examine the effect of WCF on different types of errors (i.e. treatable and untreatable linguistic features) and the level of explicitness of WCF. This led to a number of studies showing that WCF did result in more linguistically accurate writing (e.g. Bitchener & Knoch, 2008; Ellis et al., 2008; Van Beuningen et al., 2012).

There are, however, a number of issues that are still in need of attention. There are still few well-designed WCF studies that have examined the long-term effect of WCF involving multiple feedback sessions (Ellis et al., 2008). Also, it is important to ensure that the type of WCF has ecological validity (Liu & Brown, 2015; Rahimi 2019; Storch, 2018) and to examine whether asking students to revise following WCF enhances its effectiveness. Other aspects in need of study are the different ways in which learners respond to WCF (e.g. individually or collaboratively and learners' affective responses to WCF).

The current research was designed to address these gaps. First, it addressed the need for longitudinal studies investigating the effect of WCF in order to see if there is a cumulative effect of WCF. Some researchers (Ellis et al., 2008; Van Beuningen et al., 2012) claim that long-term studies involving multi-shot feedback sessions can show the real potential of correction. Ellis (2003) stated that longitudinal research is able to reveal changes in learners' errors over time. A number of studies involving dynamic WCF (Evans et al., 2011; Hartshorn et al., 2010) have shown that persistent WCF can lead to long-term improvement in linguistic

accuracy but these studies focused on a relatively small set of errors. In my study, I elected to investigate the long-term effect of semi-focused WCF (i.e., feedback that focused on a range of errors relating to a single grammatical sub-system).

Most of the WCF research has been highly focused highly (i.e. it has addressed very specific errors such as the use of the definite and indefinite articles or past tense verb forms). Some theorists (Bruton, 2009; Storch, 2018) have argued that focused WCF of this kind is not practical in real classroom contexts. It is also of doubtful value for theoretical reasons. Focused WCF is premised on an incremental, linear view of L2 acquisition, namely that WCF can help learners master the specific grammatical feature that is the focus of the feedback before moving on to the next feature. In fact, this is not how acquisition takes place. Learners work on acquiring many features concurrently. This would seem to suggest the need for unfocused WCF. Several studies (Bonilla López et al., 2018; Hartshorn et al., 2010; Van Beuningen et al. 2012) have adopted this approach. However, it also has its problems. The main problem is that extensive correction may lead to cognitive overload making it difficult for learners to process all the corrections and, in particular, to work out the rules underlying the corrections. In my study I opted for a semi-focused approach by correcting only local errors in specific grammatical sub-systems. I opted to focus on local errors because while the learners were able to write syntactically well-formed sentences, they continued to make large numbers of errors in their use of finite verbs, prepositions, and articles. Researchers claim that semi-focused WCF is more practical and needs more attention in future research (Liu & Brown, 2015).

In terms of the type of correction, this study involved direct correction as opposed to indirect correction due to a number of theoretical reasons. Unlike indirect correction, direct correction provides the correct form to the students by indicating the location of the error (i.e., crossing out or underlining an error) and writing the correct form above the error. The advantage of this type of correction is that it does not require deep processing so that pre-intermediate or intermediate level learners - as in my teaching context - do not need higher cognitive skills to work out the errors in their writing. Van Beuningen (2010) claims that direct CF is more advantageous than indirect correction for grammatical accuracy. On the other hand, when the correction is indirect, the students need to have sufficient linguistic

proficiency to work out how to correct their errors (Ferris & Hedgcock, 2006). Direct WCF seems best suited to the students in my study who were all low intermediate in level.

#### **1.4 Significance of the Study**

The study reported in this thesis is of significance for both SLA L2 teachers and SLA researchers alike. It extends WCF research by examining the effect of semi-focused WCF on learners' linguistic accuracy and writing fluency over time. This study explored: (1) the learning effect of direct semi-focused WCF on learners' accuracy of finite verb constructions over a period of ten weeks; (2) the effect of two techniques of inducing learners to attend the WCF (i.e., revision and peer discussion); (3) learners' perceptions towards feedback, revision/ peer discussion procedure; (4) the effect of feedback on writing fluency; and (5) the impact task complexity had on the effect of feedback on written accuracy.

This research provides of L2 teachers with compelling evidence regarding semi-focused WCF and learner engagement with WCF and will help to improve current feedback practices in L2 classrooms. The findings will also enable L2 teachers to incorporate sustainable and systematic feedback method into their current ESL syllabi. Overall, the study presents convincing evidence that the direct, semi-focused correction is effective and shows that students can benefit from a constant, continuous and systematic approach to WCF. Hence, this research is of considerable significance to both WCF research and L2 pedagogy.

#### **1.5 Outline of Thesis**

This thesis is made up of eight chapters. Chapter 1 (i.e. this chapter) opens with an account of the education system in Sri Lanka, describes personal and theoretical reasons for investigating WCF, and argues that English education at the tertiary level in Sri Lanka can benefit from research that examines the effect of an ecologically valid feedback approach.

Chapter 2 considers both theoretical and pedagogical perspectives on the role of WCF in L2 classrooms and critically reviews literature that has investigated the effect of WCF on learners' linguistic accuracy. It discusses different types of WCF - focused/ unfocused WCF, direct/indirect WCF. It reviews long-term/short-term WCF studies, studies that have investigated how learners engage with feedback and studies of learners' perceptions towards feedback. In so doing, it identifies gaps in research to date and provides a rationale for the decisions made in the current study.

The methodology of the study is outlined in Chapter 3. This chapter presents the results of the pilot study and discusses the changes made to the design of the main study as a result. There is a detailed account of the setting, design, procedures, and data analysis in the main study.

The next four chapters present and discuss the results of each research question - the students' perceptions of the feedback and revision/ discussion procedures (Chapter 4), the effect of WCF on linguistic accuracy (Chapter 5), the effect of different feedback conditions on writing fluency (Chapter 6) and the effect of task complexity on linguistic accuracy and writing fluency (Chapter 7).

Chapter 8 concludes the thesis with a summary of basic findings and presents the theoretical and pedagogical implications, the methodological contributions of the study to WCF research, and points out some limitations and suggestions for future research

## **Chapter 2 Literature Review**

In this chapter, I provide an account of both theoretical and pedagogical perspectives, and empirical evidence of the use of WCF in L2 classrooms. First, I provide a definition of WCF. I then present theoretical and pedagogical insights related to the role of WCF in the L2 acquisitional process. This also includes a rationale for the use of WCF. This is then followed by a critical review of studies that have investigated the efficacy of WCF on learners' accuracy. It begins with an examination of studies that examined focused/ unfocused WCF and direct/ indirect CF and then moves on to consider short-term and longitudinal WCF studies. Next, I present a critical evaluation of studies that examined the effect of requiring learners to revise their work following correction on both a revised draft and in the new piece of writing and in so doing provide a rationale for why and how revision will be incorporated in the study reported in this thesis. I also consider the relative efficacy of asking students to reflect on the corrections they received individually and collaboratively. This is followed by a critical review of studies that have investigated L2 learners' perceptions towards WCF. Finally, I summarise the main findings of the review and identify gaps in the literature that informed the research questions of the study.

### **2.1 Definition of Written Corrective Feedback (WCF)**

WCF involves a response to errors in learners' written work and is aimed at helping learners pay attention to their errors and to correct them and possibly to learn from doing this. WCF is different from content feedback which involves comments on problems related to content and organization in writing.

WCF differs from oral corrective feedback in two main ways. First, the corrective intention in oral CF may or may not be noticed by learners whereas WCF is explicit so learners will recognize immediately that the marks in their written work are corrections. Second, while oral CF is immediate (i.e. learners receive it online), WCF is typically delayed and offline (i.e. corrections will only be available sometime after the error has been committed). Oral CF is provided to individual learners but may be available immediately to other learners as hearers depending on the context. In contrast, WCF is provided on individuals' writing and is typically not available to other learners. Table 1 summarizes the main points that distinguish oral CF from WCF.

**Table 1***Main Differences Between Oral CF and WCF*

	Oral CF	WCF
1	Corrections may not be noticed	Corrections are explicit and so more likely to be noticed
2	Immediate	Delayed
3	Available to hearers as well as the person who committed the error	Typically, only available to the person who committed the error

Written corrective feedback is a type of form-focused instruction (FFI). FFI is “any planned or incidental instructional activity that is intended to induce language learners to pay attention to linguistic form” (Ellis, 2001a, pp.1-2). Ellis (2012) proposes an approach to FFI involving two main methodological types: (1) proactive FFI and (2) reactive FFI. Proactive FFI involves explicit grammar instruction (i.e. direct and indirect conscious raising instructional options and language practice options) and aims to prevent errors occurring. Reactive FFI involves responding to learners’ use of language by correcting their errors.

## **2.2 Theoretical and Pedagogical Perspectives**

In this section I review theoretical and pedagogical perspectives on the value of WCF in the L2 acquisitional process. The rationale for the beneficial effect of WCF lies in various theoretical insights and perspectives. This section will therefore discuss some of the most relevant theoretical views about the cognitive, attitudinal and behavioral processes involved in the use of WCF in the L2 acquisitional process and, in so doing, provide the rationale for the WCF approach that informs my study.

### **2.2.1. The Roles of Positive and Negative Evidence in L2 Acquisition**

Long (1996) distinguished two types of linguistic input, namely, input providing positive and negative evidence:

As positive evidence, in the process of communicating they [writers and speakers] offer models of what is grammatical and acceptable (not necessarily the same) in the



L2, but also instances of ungrammatical language use [e.g. simplification] at a time when learners do not know which is which... As negative evidence, they [writers and speakers] provide direct or indirect information about what is ungrammatical.

(p.413)

Positive evidence is the comprehensible input that is available in a natural linguistic environment as in L1 acquisition. This can also consist of grammatically acceptable utterances or sentences to which the learner is exposed when reading and listening. During or before interaction, there are various ways that linguistic input can be made comprehensible to the L2 learner – by (1) contextualizing the meaning, (2) presenting items in a more simplified way using modified linguistic structures, (3) simplification of discourse features (Ellis, 2009b), and (4) checking learners' understanding of the items. Negative evidence provides learners with information about what is ungrammatical through either proactive form-focused instruction or corrective feedback. In the case of WCF, negative evidence is necessarily explicit in nature either as input-providing (e.g. direct correction) or as output-prompting (e.g. indirect correction).

A key issue is whether L2 acquisition is entirely based on positive evidence as has been argued is the case in L1 acquisition (see Pinker, 1989). A strong case has been made that negative evidence in the form of corrective feedback or explicit instruction is needed for L2 acquisition. L2 learners sometimes formulate grammatically incorrect sentences or overgeneralize certain grammatical rules/ structures in part because of the influence of L1. In such cases, positive evidence may not be sufficient for learners to arrive at the correct target language form as it is not sufficient to disconfirm incorrect forms. This therefore raises the issue of the learnability of some grammatical structures (White, 1991) as explained by Sorace's (2003) account of optionality. Optionality offers learners two rules *x* and *y*, suggesting constructions *a* and *b*. When the target language has an obligatory rule *x* for generating *a*, learners also need negative evidence to disconfirm rule *y* as incorrect. Thus, in L2 acquisition, learnability and acquisitional considerations suggest that negative evidence is required for successful L2 acquisition. White (1991), for example, examined the potential learnability problem in acquiring the Adverb Movement Parameter by a group of French-speaking learners of English. The study showed that form-focused instruction that includes negative evidence was more effective in assisting L2 learners to master adverb placement in English than positive evidence alone. A more recent study by Izumi and Lakshmanan (2020) investigated the effect of negative evidence on the acquisition of the English passive by native

speakers of Japanese. This study found that negative evidence is highly effective in helping learners to arrive at English passive rules.

According to Long (1996), both positive and negative evidence play a role in L2 writing. In the case of positive evidence, written texts can be pre-modified to make them more comprehensible to learners and thus usable for L2 acquisition. Providing negative evidence through corrective feedback involves two key cognitive processes that facilitate L2 acquisition: (1) noticing and (2) the modification of output (Long, 1996). Negative evidence (i.e. corrective feedback) is facilitative, therefore, because it draws learners' conscious attention to errors (i.e. facilitates noticing) and pushes learners to produce modified output by asking them to revise following correction.

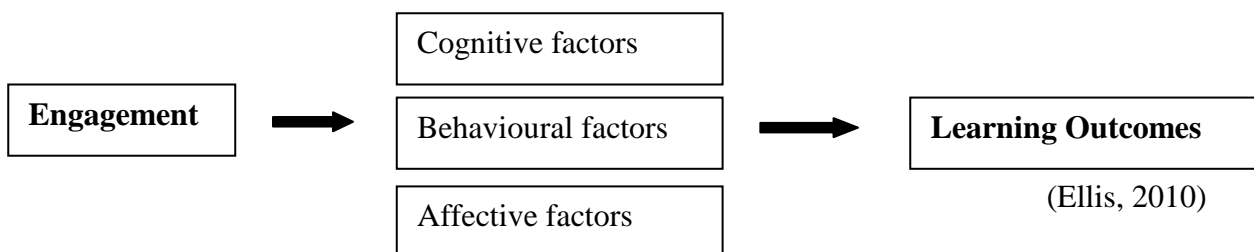
### *2.2.2 Negative Evidence Through WCF*

WCF serves as a form of negative evidence to which learners are exposed when learning an L2. Acquisition can occur when writers produce a written piece of work, receive WCF, process and uptake it, and transfer information to long-term memory. This complex acquisitional process requires the interaction of a number of cognitive, behavioural and affective factors (Ellis, 2010).

Ellis (2010) views the learners' engagement with WCF from three different perspectives: (1) cognitive (i.e. the cognitive factors involved in processing CF), (2) affective (i.e. learners' attitudinal response to the corrective feedback) and (3) behavioural (i.e. the learner's uptake of WCF, e.g. through revision). The L2 acquisitional process through corrective feedback will be discussed in terms of cognitive, affective and behavioural factors, in turn.

### **Figure 1**

*Different Perspectives of Engagement with CF*



**2.2.2.1 Cognitive Engagement with WCF.** The role of cognitive factors in the use of WCF for L2 learning has attracted considerable interest in the field of SLA (Ellis, 1995; 2010; Schmidt, 1990; 2001). The key processes involved are ‘noticing’, ‘cognitive comparison’ and ‘integration’ (Ellis, 1991).

Schmidt (1990) viewed noticing as the conscious registration of the occurrence of an event. Schmidt (1994; 2001) answered the question; ‘Can there be learning without attention?’ His conclusion was that while learners pick up some linguistic features without conscious attention (i.e. without noticing), noticing plays a key role in the process of L2 learning. In other words, noticing is generally needed to acquire new linguistic features and further develop partially acquired features. Schmidt and Frota (1986) reported a diary study where they recorded a learner’s conscious registration of linguistic features in the input prior to the learner’s attempt to use the same features in his output. This study demonstrated that language learning originates in the conscious attention to linguistic forms. Thus, noticing constitutes an essential condition for the conversion of input into uptake in L2 learning.

WCF facilitates ‘noticing’ by indicating that an error has been made. It serves to draw learners’ conscious attention to incorrect linguistic features that might otherwise be ignored or unnoticed. There are different ways of drawing learners’ conscious attention to an error that occurred in writing. One way is by inserting the correct form above the error (i.e. direct WCF). Another is by indicating there is an error (i.e. indirect WCF) by underlining the error or the use of an error code. This requires learners to draw on their own existing linguistic knowledge to notice and correct the error. I will examine the different ways of correcting errors in greater detail in a later section of the literature review.

Another key aspect regarding noticing concerns whether noticing also involves metalinguistic awareness. While noticing refers to the conscious registration of the surface structure of a particular form in the input (i.e. an exemplar of a linguistic element) – see Schmidt, 2001) - noticing with metalinguistic understanding or awareness occurs when noticing leads learners to reflect on noticed or attended forms and develop metalinguistic awareness of them, a process that can result in hypothesis testing and explicit rule-formation. Schmidt illustrated this by drawing on a study by Leow (1997). The study examined the role of awareness in relation to Schmidt’s Noticing Hypothesis (1990). It pointed to the facilitative role of awareness by showing that more awareness (noticing with metalinguistic awareness) led to hypothesis testing and rule formation. This study,

therefore, shed light on two types of awareness – a low level of awareness (i.e. noticing) and higher level of awareness (i.e. noticing plus metalinguistic understanding). There was a positive correlation between the learners' level of awareness and the production of specific linguistic features. Leow's study suggests that noticing with metalinguistic awareness helps L2 hypothesis testing and rule formation and also assists the transfer of uptake from short-term to long-term memory. This means that just providing WCF on learners' output may not be optimal for meeting the conditions required for L2 acquisition. It may be advantageous if learners use the WCF to develop metalinguistic understanding.

In addition to noticing features in the input, Schmidt (2001) also suggested that learners need to notice the mismatch between their own production and the input. Schmidt (2001) called this "noticing the gap", which he defined as attending to "a mismatch or gap between what they can produce and what they need to produce, as well as between what they produce and what target language speakers produce" (p.6). WCF works by causing the learners to notice the mismatch between TL (i.e. target Language) and their IL (i.e. interlanguage). Ellis (1995) defined this as the ability to carry out a 'cognitive comparison' between what learners had produced and what they noticed in the input. Ellis (1991), viewed cognitive comparison as the essential condition for noticing to impact on acquisition:

Noticing entails perception and storage in short-term memory. Thus, a feature that is noticed becomes 'preliminary intake'... Comparison also entails only short-term memory. It (comparison) involves the learner in identifying the difference between features noticed in the input and features currently in her own output. (p.30)

According to Ellis, the L2 acquisitional process involves three basic procedures: (1) noticing, (2) comparison and (3) integration. The linguistic features learners notice in the input, as a result of corrective feedback, for example, become 'preliminary intake' in short-term memory. Then, learners carry out a cognitive comparison between their own output and the additional input. The final procedure, integration, takes place when learners construct new hypotheses based on the comparisons they carried out and transfer them to long term memory Thus, all three of these conditions are required for L2 acquisition (e.g. Ellis, 1991).

Drawing on Swain's (1995) Comprehensible Output Hypothesis, researchers (e.g. Ellis, 2005; Skehan, 1998) recognized that opportunities for output (i.e. learner production) are not only

helpful but also necessary for successful acquisition of an L2. According to Swain (1985, 1995), there are four basic functions of L2 learner output. First, output improves fluency through practice. Second, it prompts learners to ‘notice the gaps’ in their interlanguage, which is an essential condition for L2 acquisition. Third, it enables learners to use their own production to test L2 hypotheses. Fourth, it facilitates interlanguage development by providing opportunities for meta-linguistic reflection. However, Swain acknowledged that unless learners are provided with corrective feedback, output alone may not be sufficient:

If students are given insufficient feedback or no feedback regarding the extent to which their messages have successfully (accurately, appropriately, and coherently) been conveyed, output may not serve these roles (p. 98)

Other researchers (e.g. Han, 2002; Skehan, 1998) have also argued that corrective feedback is needed for successful acquisition. Han (2002) discussed two kinds of L2 learners - ‘street learners’ and ‘classroom learners’. The former are exposed to a naturalistic environment and have to rely on intrinsic feedback, i.e. feedback that springs from the situation itself and the learner him or herself (Han, 2001). In contrast, classroom learners receive extrinsic feedback (i.e. feedback given by the teachers/ peers) on their output. The output of ‘street learners’ is typically more fluent, but it does not conform to target language norms; in contrast, classroom learners’ production is generally more accurate and precise. The main reason behind this difference is the corrective feedback that classroom learners receive on their output.

One of the key functions of output, as claimed by Swain, is its ability to prompt the learner to use their own output to test hypotheses about the L2 and based on them, modify their production. From a cognitive perspective, L2 learners need to become aware of the problems in their interlanguage (i.e. notice the gap), test hypotheses about language, receive WCF, confirm or disconfirm their hypothesis and, if necessary, reconstruct their hypotheses (Ellis, 1993; Schmidt, 1990). One such opportunity occurs when they receive WCF on output. WCF may assist learners to acquire the correct form by offering opportunities to correct their initial error. This is known as ‘feedback uptake’. Swain (1995) explains;

Producing output is one way of testing a hypothesis about comprehensibility or linguistic well-formedness ... . Sometimes this output invokes feedback which can lead learners to modify or ‘reprocess’ their output. (p.126)

In other words, WCF can trigger the cognitive processes involved in the acquisition of L2 forms by pushing learners to confirm or disconfirm a hypothesis when they compare their own output with the corrections. Other SLA researchers (e.g. Doughty & Williams, 1998; Ferris, 2002), agree with Swain's claim that the process of hypothesis testing can trigger deeper internal processing and promote the internalization of target linguistic forms.

However, learners' engagement with hypothesis testing varies depending on the type of WCF they receive on their output. If the correction involves direct WCF, the comparison is likely to be quite explicit as the learner is provided with the correct form. However, it may also push the learner to construct the rule behind the specific correction by comparing the incorrect form with the correct target language form. Then, it becomes a matter of confirming or disconfirming their own initial hypothesis. For example, in the following example, the provision of the correct verb by means of direct correction allows the learner to notice the gap between his/ her own output (*isn't care*) with the input (*doesn't care*) prompting him to disconfirm the wrong hypothesis:

'Because she ~~isn't~~<sup>doesn't</sup> care about it'

In the case of indirect correction, the learner is shown that an error has been made but is not provided with the correction, which may push the learner to a deeper level of hypothesis testing and rule re-formation. That is, the learner is engaged in a problem-solution task where he/she has to form the correct hypothesis for the located error using existing linguistic resources. In the following example, the learner is not given the correct form and so has to engage in hypothesis testing. This requires the learner to decide what the correct verb form is by drawing on his/ her own linguistic knowledge.

'Because she isn't care about it'

This process induces deeper cognitive processing of linguistic structures. This may assist learners to rehearse the correct form in their short-term memory prompting them to incorporate the correct form fully into their interlanguage (Sheen & Ellis, 2005/2011). Leow (1997), drawing on the experiment mentioned earlier, claimed that the cognitive processes involved in rule formation facilitate the transfer of uptake into long-term memory. There are, however, concerns regarding the type of WCF that best supports the L2 acquisitional process best. I will discuss this in a later section.

### **2.2.2.2 Behavioural Engagement with WCF.** Behavioural engagement with WCF

concerns the learners' responses to feedback. Hyland (2010) claimed that WCF only has an effect when learners are 'willing and motivated to engage with it' (p. 177). There can be different ways of prompting learners to engage actively with the feedback they receive. For example, the learners may benefit from the feedback by revising their draft, by discussing the corrections with peers or by studying the corrections by themselves.

This kind of behavioural engagement with WCF (i.e. in the form of revising or discussing corrections with peers) triggers learners' cognitive engagement with corrective feedback. That is, the method they use to process and respond to the WCF should stimulate 'noticing' and 'linguistic analyses' of their own output. Chandler (2003), for example, argued that 'having the students do something with the error correction besides simply receiving it' (p. 293) is crucial in facilitating the L2 acquisitional process.

Revising an initial draft is a one such way in which students can engage with the feedback they receive. Liu and Brown (2015) claim revision as 'a necessary first step in the development of written accuracy' (p.67). Requiring learners to revise their previously written draft encourages them to notice the gap between their own output and the target language form, thereby leading to 'pushed output'. Nobuyoshi and Ellis (1993) showed that 'pushing' learners to modify their own output by means of oral CF leads not only to immediate accuracy gains but also to L2 acquisition. The same is likely to be true of WCF.

Liu and Brown (2015), in their methodological synthesis of WCF studies, emphasized the value of revision for uptaking feedback and L2 learning. The researchers analyzed 44 empirical WCF studies. These included published articles (k- 31), edited book chapters (k -1) and doctoral dissertations (k- 12). The study examined the overall effectiveness of WCF, strengths and limitations of methodological designs with a focus on previous methodological syntheses, meta-analyses and existing WCF studies. Liu and Brown examined whether these studies included revision following WCF. The study focused mainly on a few design factors related to revision - whether the participants received (1) training on revision, (2) grammar instruction, (3) an error key and (4) a grade on the revised draft. According to them, if there is not opportunity to revise the full benefits of WCF will not be realized and there will be no long-term retention of its effects. However, the study did not investigate what impact asking learners to revise following WCF had on subsequent performances. This points to a possible gap in the literature to date.

Another question of theoretical interest is what students do with WCF if they are not required to revise their writing (Ellis, 2010). One possibility is that learners could engage in peer discussion of their corrections. Another is that they are simply required to study the corrections carefully. Liu and Brown (2015), however, expressed doubts about asking learners to look over the corrections without having to revise and suggested that it is not sufficient to ensure they process the WCF they are given. Qi and Lapkin (2001) suggested the use of reformulation (i.e. rewriting L2 learner's written work while preserving the original content intact) to help learners notice the gap between their IL and TL and process the feedback. Using models in the process approach to writing is another way of drawing learners' attention to problems (Hanaoka & Izumi, 2012). However, the effect of strategies for promoting learners' noticing of corrections has been thus far an area that is underexplored in SLA.

**2.2.2.3 Affective Engagement with WCF.** Affective engagement with the processing of WCF is likely to have an impact on the L2 learning process and its outcome (Bitchener, 2016; Dörnyei, 2005; Storch & Wigglesworth, 2010). That is, affective factors such as learner anxiety, beliefs, attitudes and motivation can either promote or hinder L2 learning. One of the arguments leveled against grammar correction is that it may trigger anxiety among learners and hence may interfere with L2 acquisition. Krashen (1982), for example, claimed that corrective feedback creates an "anxiety-provoking" learning environment. It may also lead learners to become defensive by raising their affective filter and avoiding the use of complex structures (Krashen, 1982). Truscott (1996), arguing that grammar correction should be abandoned, also noted that WCF may be anxiety-inducing for learners.

However, Sheen (2011) in her investigation of the potential effect of anxiety found that while learners' attitudes towards feedback had a mediating effect on both oral and written CF, anxiety had an effect only on oral CF and not on WCF. The main reason behind this is that WCF involves off-line correction (i.e. is delayed) whereas oral CF involves on-line correction. The former, therefore, may be less anxiety inducing than the latter because it does not require an immediate behavioral response. Sheen's study provides counter evidence to Truscott's (1996, 1999) claim that WCF is harmful because it creates an anxiety provoking classroom climate.

There is also evidence that affective factors such as learners' attitudes may influence learners' engagement with WCF (Han, 2017) and feedback retention (Storch & Wigglesworth, 2010). For example, learners tend to respond to the feedback according to the importance they



attach to accuracy in writing (Hyland, 1998). Also, learners are likely to fail to respond to feedback if the type of feedback they receive does not match their belief about what type is needed.

According to Storch and Wigglesworth (2010), resistance to WCF leads to lack of retention. Adding to this, some other researchers (Swain, 2006; Swain & Lapkin, 2002) found that CF may result in no uptake if it violates learners' beliefs about what is needed.

Drawing on sociocultural theories, Lantolf and Pavelenko (2001) noted that learners as intentional agents (i.e. especially high proficient learners) assign relevance and significance to certain events. That is, their behavior is most likely to be guided by their beliefs and their learning goals. In the case of receiving WCF, these beliefs and goals may influence what learners notice, what they are ready to accept or reject and, whether and how they respond. This, in turn, impacts how much they uptake (Storch & Wigglesworth, 2010).

There are different views about whether WCF has a negative affective impact on learners. On the one hand, there is evidence that some affective factors such as beliefs and perceptions may have an impact on L2 learning. On the other hand, some theorists present different arguments regarding whether corrective feedback ability invokes anxiety among learners. The role of affective factors is still little researched making it too difficult to come to firm conclusions about the extent to which WCF influences negatively the L2 acquisitional process.

### **2.3 Implicit/ Explicit Knowledge and WCF**

The role of explicit and implicit knowledge in second language acquisition has long figured in discussions of corrective feedback. Explicit knowledge involves conscious awareness of the phonological, lexical, grammatical, pragmatic features of the L2 along with knowledge of metalanguage (Ellis, 2004). In contrast, implicit knowledge is unconscious but available for use rapidly and easily (DeKeyser, 1998; Ellis, 2005).

There seems to be a consensus among researchers that the ultimate goal of instruction should be to develop implicit knowledge of an L2. The value of explicit knowledge resulting from L2 instruction, therefore, remains a controversial issue (Ellis, 2005). This may be because the cognitive functions of the two knowledge bases are different. As Ellis puts it, implicit knowledge is exemplar based and that may result in rapid and easy communication while explicit knowledge is metalinguistic in nature. That is Implicit knowledge can be processed automatically and accessed readily in spontaneous day-to-day communication. In contrast, explicit knowledge consists of

‘rules’ that the learners can draw on consciously when producing utterances and/ or editing their output (Ellis, Loewen & Erlam, 2017).

It is important to consider how WCF contributes to L2 acquisition in relation to the issue of implicit/explicit knowledge. Arguably, there are two key purposes of WCF: (1) it assists learners to produce more linguistically accurate writing and, (2) it facilitates L2 acquisition. Thus, the key issue that remains to be discussed is whether WCF contributes to both explicit and implicit L2 knowledge or only to explicit knowledge (Shintani & Ellis, 2013).

There are three different positions regarding the role of explicit/ implicit knowledge in L2 development, namely, (1) non-interface, (2) strong interface and (3) weak interface positions. Some opponents of CF (e.g. Krashen, 1982; Schwartz, 1993; Truscott, 1996) are of the view that explicit and implicit knowledge are distinct and, therefore, the former cannot be converted into the latter. This view supports a zero-grammar approach. Krashen (1982), for example, equated ‘learning’ with conscious effort resulting in explicit knowledge while ‘acquisition’ is unconscious and leads to implicit knowledge. Krashen claimed these two knowledge bases are distinct and unrelated. Krashen’s view, therefore, suggests that there is no interface connecting explicit and implicit knowledge and, that WCF only facilitates the development of explicit knowledge. According to his view - if provided with sufficient time to access the knowledge - explicit L2 knowledge gained through WCF is only useful for monitoring L2 production and there are no acquisitional benefits from WCF.

Truscott (1998, 1999, 2007, 2010) argued that error correction does not contribute to L2 development (i.e. implicit knowledge or what he called “genuine knowledge of language” (1998, p. 120). The basis of his argument is that WCF has an effect on the learners’ explicit knowledge but not on the type of knowledge (i.e. implicit knowledge) required for communicative purposes. He claimed that WCF only contributes to the development of explicit knowledge required for grammar tests and revising an already corrected text. Truscott (1996) concluded that L2 learners’ implicit knowledge is not susceptible to influence through WCF and that WCF only results in ‘pseudolearning’ (i.e. the development of explicit knowledge).

Other researchers (e.g. DeKeyser, 1998) suggest that there is an interface between explicit and implicit knowledge. According to DeKeyser (1998), the information/explicit knowledge learners gain from instruction and WCF can be automatized through systematic ‘practice’.

Anderson (1983, 1985) refers to explicit knowledge as declarative knowledge and to implicit knowledge as procedural knowledge and proposes that the former converts to the latter through practice. According to this position, therefore, WCF can lead to the kind of knowledge needed for everyday communication providing there is an opportunity to practice the explicit knowledge that it initially helps to develop.

The weak interface position (Ellis, 1993) draws on the key acquisitional processes of ‘noticing’ and noticing the gap’ (Schmidt, 1994) (*see* Section 2.1.2.1) and acknowledges the possibility of explicit knowledge becoming implicit. That is, WCF can contribute to the development of implicit knowledge by prompting learners to carry out cognitive comparisons (i.e. noticing-the-gap) between their linguistic output and the input (N. Ellis, 2005; R. Ellis, 1993). This interface between the two knowledge systems does not happen immediately. Learners still need exposure to L2 input and opportunities for practice to enable the effects of explicit knowledge on noticing, and noticing-the-gap, to lead to the development of implicit knowledge (Ellis & Shintani, 2013).

Truscott (1999) suggested that corrective feedback contributes to the development of learners’ explicit knowledge. This serves the first purpose of WCF by assisting learners to produce more linguistically accurate writing by revising the initial draft. The second purpose concerns the way in which WCF contributes to L2 acquisition. Receiving WCF prompts learners to ‘notice-the-gap’ between their interlanguage and the target language and creates the opportunity for explicit knowledge to become implicit in accordance with the weak interface position. In other words, explicit knowledge fosters L2 development by facilitating ‘noticing’ and ‘noticing-the-gap’ (Ellis (1993). In order for the interface to occur, learners need exposure to L2 input and more production opportunities. Shintani and Ellis (2013), for example, claim that one-shot of feedback may only result in explicit knowledge. This suggests that exposing learners to multiple WCF sessions may be necessary to facilitate the acquisition of implicit knowledge.

## **2.3 Types of WCF**

### ***2.3.1 Introduction***

This section begins with a detailed description of the different WCF strategies that have been developed, and then moves on to review the empirical studies that have investigated WCF. The review includes a critical evaluation of studies that have investigated the efficacy of focused

and unfocused WCF (see Section 2.3.2 for a detailed description for each type). I will discuss the relative effectiveness of direct and indirect strategies drawing on examples from research studies. Both of these sections provide the rationale for the type of correction investigated in the study reported in this thesis.

### ***2.3.2 Types of WCF***

Ellis' typology (2009a) classifies the different corrective feedback strategies: direct WCF, indirect WCF, metalinguistic feedback, electronic feedback and reformulation. It presents options for how the learners need to respond to the feedback (e.g. revising an initial draft, peer discussion). The typology is informed by cognitive theories and empirical studies of corrective feedback. As is shown in Table 2, it informs both the WCF research base and second language (L2) teaching. It is of importance to second language acquisition (SLA) researchers as it informs the design of experimental studies. It, further, provides a descriptive account of the WCF options for teachers to judiciously develop their own correction strategies.

**Table 2***Types of Written Corrective Feedback (Ellis, 2009a, pp.98-99)*

Type of CF	Description	Studies
<b>A Strategies for providing CF</b>		
<b>1 Direct CF</b>	The teacher provides the student with the correct form.	e.g. Lalande (1982) and Robb <i>et al.</i> (1986).
<b>2 Indirect CF</b>	The teacher indicates that an error exists but does not provide the correction.	Various studies have employed indirect correction of this kind (e.g. Ferris and Roberts 2001; Chandler 2003).  Fewer studies have employed this method (e.g. Robb <i>et al.</i> 1986).
a Indicating + locating the error	This takes the form of underlining and use of cursors to show omissions in the student's text.	
b Indication only	This takes the form of an indication in the margin that an error or errors have taken place in a line of text.	
<b>3 Metalinguistic CF</b>	The teacher provides some kind of metalinguistic clue as to the nature of the error.	Various studies have examined the effects of using error codes (e.g. Lalande 1982; Ferris and Roberts 2001; Chandler 2003).  Sheen (2007) compared the effects of direct CF and direct CF + metalinguistic CF.
a Use of error code	The teacher writes codes in the margin (e.g. wrong word; article).	
b Brief grammatical descriptions	The teacher numbers errors in text and writes a grammatical description for each numbered error at the bottom of the text.	
<b>4 The focus of the feedback</b>	This concerns whether the teacher attempts to correct all (or most) of the students' errors or selects one or two specific types of errors to correct. This distinction can be applied to each of the above options.	Most studies have investigated unfocused CF (e.g. Chandler 2003; Ferris 2006; Sheen 2007), drawing on traditions in SLA studies of CF, investigated focused CF. [1]
a Unfocused CF	Unfocused CF is extensive.	
b Focused CF	Focused CF is intensive.	
<b>5 Electronic feedback</b>	The teacher indicates an error and provides a hyperlink to a concordance file that provides examples of correct usage.	Milton (2006).
<b>6 Reformulation</b>	This consists of a native speaker's reworking of the students' entire text to make the language seem as native-like as possible while keeping the content of the original intact.	Sachs and Polio (2007) compared the effects of direct correction and reformulation on students' revisions of their text.

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B Students' response to feedback

For feedback to work for either redrafting or language learning, learners need to attend to the corrections. Various alternatives exist for achieving this.

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1 Revision required

A number of studies have examined the effect of requiring students to edit their errors (e.g. Ferris and Roberts 2001; Chandler 2003). Sheen (2007) asked students to study corrections.

---

2 No revisions required

a Students asked to study corrections

A number of studies have examined what students do when just given back their text with revisions (e.g. Sachs and Polio 2007).

b Students just given back corrected text

No study has systematically investigated different approaches to revision.

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**2.3.2.1 Indirect Written Corrective Feedback.** Indirect WCF involves indicating the error without providing the student with the correct form. There are two ways of correcting errors indirectly - either indicating that an error has occurred in the margin without indicating its location or underlining or circling the error and inserting cursors to indicate a missing word showing its location.

### Table 3

*Examples of How Indirect Corrective Feedback is Provided*

Indirect WCF		
01. Indicating and locating the error	i. She <u>write</u> a letter <u>yesterday</u> to send <sup>^</sup> her brother	
02. Indicating only (marginal)	ii. She write a letter yesterday to send her brother.	X
	iii. However, she forgot to send him a birthday gift.	√

As shown in Table 3, the feedback involves indicating and locating two errors, ‘write’ and ‘yesterday’ by underlining and by inserting a cursor to indicate there is a missing word. However, it does not provide the correct form for the learners. The second example shows that the error is indicated in the margin (e.g. X beside the erroneous line and √ against the correct line). As errors are either located or indicated without providing the correct form in indirect corrective feedback, the learners need to work out what the error is and/or how to correct it using their own linguistic competence.

The advantage of indirect correction is that it involves learners engaging in hypothesis testing and potentially involves deeper processing, which might facilitate internalisation of the correct form (Ferris, 2002). Various studies (e.g. Ashwell, 2000; Chandler, 2003; Ferris & Roberts, 2001) have investigated the effect of Type 1 in Table 3 (i.e. indicating and locating the error). Another study by Robb et al. (1986) employed Type 2 (i.e. indicating only) and found that correction groups significantly outperformed a no feedback group. Some other studies (Ferris, 1995; Lalande, 1985) found an advantage for indirect correction because it helps learners to self-edit their writing. This, however, requires learners to rely on their own linguistic competence to work out how to correct the error/s and it may also require greater cognitive processing to internalize the correct form (Chandler, 2003). Therefore, indirect correction is unlikely to be effective with learners who lack the knowledge needed to figure out the nature of the error. I, therefore, decided not to employ indirect correction in my study as it can be ineffective for the low and intermediate learners in my classes.

**2.3.2.2 Direct Written Corrective Feedback.** Direct WCF provides the student with the correct form by crossing out the error and writing the correct form above the error or in the margin beside the line containing the error. The missing linguistic elements can be indicated with cursors and inserted into the text. Direct WCF is illustrated in this example,

**Table 4**

*An Example of How Direct Corrective Feedback is Provided*

Direct WCF	<p style="text-align: center;"><i>wrote</i>      <i>yesterday</i>      <i>to</i></p> <p>She <del>write</del> a letter <del>yesterday</del> to send ^ her brother.</p>
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As indicated in the above example, the verb, ‘write’ and the adverb, ‘yesterday’ were crossed out and the correct forms were written above the error. The missing preposition, ‘to’ is also inserted into the text with a cursor.

A number of studies (Bitchener et al., 2005; Bitchener, 2008; Bitchener & Knoch, 2009; 2010a) investigated the effect of direct correction and found that the groups receiving direct correction outperformed control groups. The advantage of direct correction is that there is no ambiguity in the mind of learners. However, it does not require deep processing, and it may only benefit item learning or system learning<sup>1</sup> if learners fail to identify the underlying rules involved in the corrections.

**2.3.2.3 Meta-Linguistic Written Corrective Feedback.** Meta-linguistic WCF involves providing meta-linguistic clues about the nature of the errors; these comments are explicit. For Ellis (2009), they are of two types. The most common type is the use of codes for errors in the form of abbreviated labels. Examples of these abbreviated labels are ‘sp’ for spelling errors, ‘v’ for an error in the verb tense, ‘adv’ for an incorrect adverb, etc. Types 1 and 2 in Table 6 use error codes and constitute examples of located metalinguistic feedback. The only difference between these two types of correction is that one uses error codes positioned above the error showing the exact location of the error whereas in the second the codes are positioned in the margin of the text necessitating the learner to identify where the error/s are located in the sentence. In Type 3 in Table 5, each error is numbered and metalinguistic explanations for the different errors are provided under the text. All of these types of meta-linguistic feedback require learners to work out how to correct their errors.

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<sup>1</sup> Item learning is the learning of specific instances. System learning is the storage of abstract rules that govern a set of instances (Ellis, 1999).



Table 5

*Examples of How Meta-Linguistic Feedback is Provided*

Meta-linguistic CF	(1)	
	She <b>v.</b> ..... <b>sp.</b> ..... <b>prep.</b> ..... her.	
	She write a letter yesteday and send it her brother.	(2) v.; sp.; prep
<p>(3)</p> <p><b>(01)</b>                      <b>(02)</b>                      <b>(03)</b></p> <p>She write a letter yesteday and send it to her brother.</p> <p>(01) and (03) The simple past tense is needed for completed actions.</p> <p>(02) The correct spelling for <i>yesterday</i> not <i>yesteday</i>.</p>		

There are comparative studies that examined the relative effect of direct/ indirect correction accompanied by written /and oral meta-linguistic explanation For example, Sheen (2007) examined the effects of two direct WCF strategies on learning - direct correction with and without meta-linguistic information in a study of 91 intermediate ESL learners - and found no difference in an immediate post-test but an advantage for direct correction with metalinguistic comments in the delayed post-test two months later. On the other hand, some studies (Bitchener, 2008; Bitchener & Knoch, 2008) reported that direct WCF by itself, and direct WCF plus meta-linguistic correction, were equally effective.

The advantage of this type of correction is that it provides metalinguistic clues to help the learners to correct their errors. However, this can be disadvantageous for learners if they lack the

metalinguistic knowledge needed to understand the feedback and correct the error. For example, Types 1 and 2 in Table 5 require learners to use their metalinguistic knowledge to work out the correct usage of the target linguistic error indicated by the abbreviated labels. Metalinguistic feedback can be ineffective with low or intermediate level learners such as the learners in my study. Another disadvantage is that the type of feedback as illustrated in Type 3 in Table 5 is time consuming and impractical in many teaching situations including my own where classes are large. Due to its impractical and time-consuming nature (*see* Type 3 in Table 5), I decided not to employ metalinguistic feedback in my own study.

**2.3.2.4 Electronic Corrective Feedback.** Electronic corrective feedback can make use of corpora of written English. It requires learners to look up examples of correct usage and other information in online resources using a hyperlink provided by the teacher as a response to the indicated error. This also guides learners to explore and use online resources effectively as writing aids as they revise their writing. Milton (2006) examined the effect of this approach on improving learners' linguistic competence. However, this type of feedback is not practical in my teaching context as (1) it requires both the teachers and learners to have access to the software programs that enables electronic feedback and (2) it also requires the teachers to have access to the learners' word-processed scripts so that they can enter comments in the scripts. This is not feasible for the learners in my study. The simplest way of employing electronic feedback is by using a grammar check but this would require each learner to have access to word processed documents. This is also impractical in my teaching context and, therefore, I decided not to employ electronic feedback in this study.

**2.3.2.5 Reformulation.** Reformulation involves a native speaker reconstructing the learner's text and the learner is then required to compare the original text with the reformulated one to identify the differences and revise the text by deciding which changes to accept. This type of feedback is viewed as a form of direct correction, but it involves the whole text rather than just those parts containing errors. For example, Sachs and Polio (2007) compared the effects of direct correction and reformulation on a revised draft and did not find reformulation to be more effective than direct correction. Although this is an interesting way of providing feedback, it is not practical when there are large amounts of learners' writing to be corrected as is the situation in my instructional context.

### 2.3.3 Focused versus Unfocused WCF

WCF can either be focused or unfocused. Focused WCF involves correcting just one or two specific types of error, such as errors in past tense forms (Ellis, 2009a). As shown in the example below, the correction involves errors in just the simple past verb form but not the rest of the errors – the spelling error in ‘yesterday’, the missing preposition, ‘to’ and the article, ‘a’ are disregarded. Here, the focus of correction is just on the simple past verb form.

**Table 6**

*An Example of How Focused WCF is Provided*

<b>Focused WCF</b>	<p><i>wrote</i>                      <i>sent</i></p> <p>She write letter yesteday and send it her brother</p>
------------------------	---

Unfocused WCF involves correcting all (or a range of) the errors made by learners in writing (Ellis et al., 2008). As is shown in Table 7, all the linguistic errors (in verb form, adverb, and the missing preposition and article) made by the learner have been corrected.

**Table 7**

*An Example of Unfocused WCF*

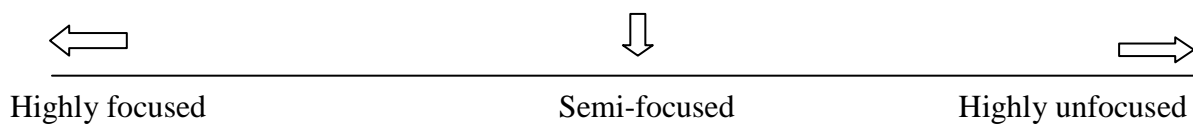
<b>Unfocused WCF</b>	<p><i>wrote a yesterday sent to</i></p> <p>She <u>write</u> <sup>^</sup> letter <u>yesteday</u> and <u>send</u> it <sup>^</sup> her brother</p>
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**2.3.3.1 Unfocused-Focused WCF Continuum.** The extent to which the errors in L2 writing should be corrected has been debated intensely. While some researchers have opted to examine the effect of focused WCF, others believe comprehensive WCF is more effective and practical (Van Beuningen et al., 2012). Ellis et al. (2008) first identified the ‘focused – unfocused’ distinction, viewing it as a continuum and not as a dichotomy. Ellis et al., (2008) in their investigation of the effect of focused and unfocused WCF suggested that the difference between the two feedback types is not completely clear and that the degree of focus in WCF is continuous. With respect to the scope of WCF, Liu and Brown classified WCF studies into three types, (1) unfocused (comprehensive), (2) mid-focused and (3) highly focused. The selective or focused approach aims to correct one or

perhaps two linguistic feature/s (e.g. errors in articles in English) in writing. The comprehensive or unfocused approach addresses all the errors in learners' writing while the semi-focused WCF targets a selection of errors (see Ellis et al., 2008). Liu and Brown (2015) considered the 'mid-focused' approach as responding to two to five error categories (e.g. errors in simple present tense, prepositions, articles) in writing. The findings showed that while 55% of studies reviewed included unfocused studies, a quarter (25%) included highly focused studies. Mid-focused studies consisted of 27% of WCF studies. Figure 2 depicts the focused – unfocused continuum. At one end of the continuum there is completely focused WCF (i.e. highly selective/ highly focused), that is focus is on a single error type whereas the other end of the continuum presents the completely unfocused WCF (i.e. comprehensive), that is focus is on all the errors. As the number of target linguistic features decreases from the 'highly unfocused' end and increases from the 'highly focused' end of the continuum, the WCF becomes 'semi-focused' or 'less-focused' or 'mid-focused' (Liu & Brown, 2015).

## Figure 2

### *Unfocused - Focused WCF Continuum*



The focused-unfocused distinction is best viewed as a continuum with 'focused' referring to one or two errors being corrected and 'unfocused' to correcting all or most of the errors. 'Semi-focused' correction targets a selection of errors (three to six errors) and constitutes the middle of the continuum. Researchers have used different terms for semi-focused WCF such as mid-focused WCF (Liu and Brown, 2015) but I prefer the term semi-focused WCF.

A number of studies have examined the effects of focused and unfocused WCF on learners' linguistic accuracy. Theoretical and pedagogical arguments for and against both feedback types have also been advanced. The advocates of focused WCF approaches have reported that focused WCF is more effective than unfocused correction in drawing learners' attention to the corrections; the probability of noticing the error/s, and/or their understanding of the rule that has been violated is greater when correction targets a specific error type (e.g. Ellis et al. 2008; Sheen et al. 2008). The rationale for believing focused WCF is more effective is that focusing learners' attention on one

single error will help them to develop a clear understanding of the nature of the error they are making. Lee (2019) also noted that focused WCF is less burdensome on L2 teachers.

However, there are also arguments in support of unfocused WCF. Unfocused correction is prevalent across most L2 instructional contexts and, therefore, has ecological validity. Learners generally prefer unfocused correction (Lee, 2017) and can become dissatisfied if errors are left uncorrected in their writing (Van Beuningen et al, 2008). There is clear evidence that L2 learners demand teacher corrections on all their errors in writing (Leki, 1991). Given that both the teachers' and learners' purpose is to improve overall writing accuracy, targeting one or two errors at a time might not suffice as there will not be enough time to address all learners' errors in a focused way. These arguments point to the potential and viability of unfocused correction.

Both of these approaches have come in for criticism. Some researchers (Storch, 2010; 2018; Van Beuningen, 2010) have questioned the ecological validity of focused feedback and its relevance for real classrooms as teachers are not likely to correct one error at a time and disregard the rest of the errors. Further, the writing tasks used in highly focused studies become more like grammar exercises rather than authentic tasks (Van Beuningen et al. 2012). However, there are also concerns about unfocused correction. For example, unfocused correction can be time-consuming and labour-intensive for teachers and can result in poor-quality corrections (Truscott, 2001). Factors such as fatigue, time pressure and lack of required knowledge can affect the quality of unfocused feedback. For learners, unfocused correction may lead to 'attentional strain' and to 'information over-load' (Bitchener, 2008). Another problem is the lack of systematicity (Sheen et al., 2009). These different views about focused and unfocused feedback strategies led me to explore whether, and to what extent, each one is effective, and which might work best to improve the linguistic accuracy of the learners in my teaching context.

#### ***2.3.4 Studies Investigating the Focused - Unfocused WCF***

The following review considers four type of WCF studies: (1) focused WCF studies, (2) unfocused WCF studies (both early and more recent studies, (3) semi-focused WCF studies and (4) studies that have compared the effect of both focused/ unfocused feedback and unfocused/ semi-focused feedback. Table 8 provides brief summaries of the studies in these four categories.

**Table 8***WCF Studies With Respect to the Scope of Feedback*

<b>Type</b>	<b>Study</b>	<b>Participants</b>	<b>Errors focused</b>	<b>Effect</b>
<b>Type 1</b>  <b>Focused Studies</b>	Bitchener and Knoch (2010a)	52 low-intermediate (ESL) learners in a New Zealand University	Two functions of English article system (first mention and anaphoric reference)	Yes
	Bitchener (2008)	75 low-intermediate level (ESOL) learners in a school in New Zealand	First mention and anaphoric reference for English articles	Yes
	Sheen(2007)	91 ESL learners (intermediate)	English articles	Yes
	Shintani and Ellis (2013)	49 ESL learners (low-intermediate) in a language programme in the United States	Indefinite article –a/an	
<b>Type 2</b>  <b>Early Unfocused Studies</b> (between 1980 to	Polio, Fleck and Leder (1998)	65 ESOL learners at Michigan State University	Feedback involved all the errors in writing, but only the errors in grammatical, lexical items and punctuation errors were counted in the analysis	No
	Semke (1984)	141 first-year learners of German in an American University	All the errors in writing	No

2000)	Lalande (1982)	60 intermediate-level students learning German as a foreign language in a Pennsylvania University	All lexical, grammatical and orthographic errors	No
	Robb, Ross and Shortreed (1986)	134 (EFL) first-year Japanese learners learning English as a foreign language in a college	All lexical, syntactic, and stylistic errors	No
	Sheppard (1992)	26 upper-intermediate level learners	All verb errors (person, tense, aspect and context), punctuation marks, subordinate clauses, sentence-boundary markers	No
	Kepner (1991)	60 intermediate learners of Spanish at a college	All sentence-level errors	No
	Fathman and Whalley (1990)	72 ESL learners at a college in America	All errors	Yes
	Lee (1997)	141 EFL learners (low intermediate) at a Hong Kong university	Unfocused (20 grammatical errors)	Yes
	Ferris and Roberts (2001)	67 ESL learners at an American university	Unfocused (verbs, noun endings, articles, sentence	No

<b>Type 2</b>  <b>Recent Unfocused Studies</b> (between 2000 to 2018)			structure, wrong word)	
	Chandler (2003)	31 (ESL) post-intermediate learners at an American college	16 error categories – including word (form, order, choice, person, division) verb (tense, voice, additions or omissions, spelling, incomplete sentences, punctuation, capitalization, articles, pronoun, repetition.	Yes
	Van Beuningen et al. (2008)	62 multilingual learners learning Dutch as a second language in Dutch secondary schools	9 categories of errors: word order, word choice, spelling, word form, addition or omission of a word, incomplete sentences, capitalization, and punctuation	Yes
	Van Beuningen et al. (2012)	268 learners learning Dutch as a second language in a secondary school	9 error categories including (i) lexical errors, (ii) grammatical errors and (iii) orthographical errors	Yes
	Zhang (2017)	120 EFL learners in a Chinese college	Unfocused direct (all grammatical, word use and spelling errors)	Yes
	Bonilla Lopes, Van Steendam, Speelman	139 low intermediate learners in a university in Costa	All the grammatical and/or non-grammatical correction	Yes



and Buyse (2018)	Rica		
Karim and Nassaji (2018)	53 intermediate level (ESL) learners in Canada	All the grammatical and non-grammatical correction	Yes
Kurzer (2018)	325 learners (beginning, intermediate, advanced) in a U.S. university	Global, local and mechanical errors	Yes
Viyatkina (2010)	66 college-level beginners of German (GFL)	15 error categories (i.e. errors in verbs, nouns, adjectives, word choice/order, punctuation and spelling)	Short-term effects
Hartshorn, Evans, Merrill, Sudweeks, Strong- Krause and Anderson (2010)	47 advanced-low to advanced-mid (ESL) learners at an American University	All the linguistic errors	Yes
Evans, Hartshorn, & Strong- Krause (2011)	30 university- matriculated learners (ESL) in the USA	All the linguistic errors	Yes

<b>Type 3</b>  <b>Semi-focused WCF</b>	Bitchener, Young and Cameron (2005)	53 post-intermediate level (ESOL) migrant learners in a New Zealand university	(1) Prepositions, (2) The simple past structure (3)The definite article in English	Significant effect for the simple present tense and the definite article
	Benson and DeKeyser (2019)	151 ESL learners of English	(1) Direct focused WCF (2)Metalinguistic Feedback (Simple past and present perfect tenses) (3)Control Group	Yes
	Hashemnezhad & Mohammadnejad (2012)	80 EFL learners in an Iranian university	(1) Direct unfocused WCF (2)Indirect (coded) unfocused WCF	Yes
<b>Type 4</b>  <b>Comparative studies</b>  Focused vs Unfocused	Ellis, Sheen, Murakami and Takashima (2008)	49 intermediate (EFL) Japanese learners	Focused Group – Errors in articles  Unfocused Group- Other linguistic errors including articles	Both groups outperformed the control group. No significant group difference was found
	Sheen, Wright and Moldawa (2009)	80 intermediate level learners (ESL) in a US college	Focused Group – errors in English articles  Unfocused Group - a range of grammatical features (i.e. English articles, copula ‘be’, prepositions, irregular/regular past tense)	Effect for focused WCF

Semi-focused vs Unfocused	Frear and Chu (2015)	42 Chinese learners in a Taiwanese college	Focused (weak verbs) Unfocused (all errors)	Effects for Focused WCF
	Rahimi (2019)	78 intermediate French (ESL) learners of English in a Canadian University	(1)Unfocused WCF+revision (all errors) (2)Unfocused WCF + no revision (3)Semi-focused WCF+revision (word and sentence errors) (4)Semi-focused + no revision	Effects for both unfocused and semi-focused
	Pashazadeh (2017)	116 learners (pre-intermediate) in a school in Iran	Semi-focused(functions of articles, the infinitive, the unreal conditional) Unfocused(range of errors) Revision (Unfocused CF+Revision)	Short-term effects

**2.3.4.1 Type 1: Focused WCF studies.** There is a growing number of Type 1 studies (e.g. Bitchener, 2008; Bitchener & Knoch, 2008, 2010a, 2010b; Sheen, 2007) that have examined the effect of highly focused feedback on a single linguistic feature (e.g. the use of articles). They suggest that focused correction is effective in improving the accuracy of the targeted form. Bitchener's (2008) study is an example of this.. He examined the effectiveness of focused WCF on two functional uses of the English article system with 75 ESL learners (low intermediate). There was a control group (that did not receive WCF) and three experimental groups. The first two groups received focused WCF with and without written meta-linguistic explanation and the third group received focused WCF with oral and written meta-linguistic explanation. The study found that the experimental groups outperformed the control group in accuracy gains and the accuracy improvements were retained even after two months.

Keeping the same treatment conditions, Bitchener and Knoch (2010a) examined whether the accuracy gains could be retained across a period of 10 months (more extensive

period of time). This study involved 52 low intermediate (ESL) learners receiving corrections on their errors in the use of English articles over a period of 10 months. The study found that the experimental groups outperformed the control group and the effects of the feedback were retained over an extensive period. This longitudinal study supported the argument that focused WCF can contribute to significant accuracy improvements in the use of articles in English. A similar study by Sheen (2007) investigated the effect of focused feedback targeting the use of English article system on 91 ESOL learners (intermediate) at an American college. The learners were divided into three groups: (1) direct focused WCF plus metalinguistic explanation, (2) direct focused WCF and (3) a control group that received no treatment. Both the treatment groups outperformed the control group in both the immediate and delayed tests. This study, therefore, found further evidence in support of the effects of focused WCF with regard to the use of English articles.

**2.3.4.2 Type 2: Unfocused WCF studies.** The second type of studies examined the effectiveness of unfocused correction on learners' linguistic accuracy. They comprised two kinds: (1) a set of earlier studies (Kepner, 1991; Lalande, 1982; Polio et al. 1998; Robb et al., 1986; Semke, 1984; Sheppard, 1992) conducted between 1980 to 2000 and (2) a set of more recent studies (Bonilla López et al., 2018; Chandler, 2003; Evans et al., 2011; Hartshorn et al., 2010; Karrim and Nassaji, 2018; Van Beuningen et al., 2008; 2012) carried out between 2000 to 2020. While the first set of studies failed to support unfocused WCF but included methodological issues in their study design, the second well-designed set of studies showed positive effects for unfocused WCF.

The first set of empirical studies produced mixed results but in general most of the studies failed to provide support for unfocused correction. For example, Polio et al. (1998) studied 65 ESOL learners at Michigan State University over a 15-week period to examine the extent to which the learners improved in accuracy with and without teacher feedback. The study used a quasi-experimental design (pre-test – treatment session – post-test). There were two experimental groups. The first group received unfocused correction on two journal entries a week and was required to edit their writing and receive grammar instruction. The second group wrote four journal entries each week but did not receive any feedback. Both the pre-test (in week two) and post-test (in week 13) involved a 30-minute essay followed by revision. Grammatical errors, lexical items, and punctuation errors were counted in the

analysis but not spelling errors and article errors. Error-free T-units were calculated and a mixed- three-way analysis of variance was computed to examine group differences. The researchers reported that all the participants in the study significantly improved their accuracy in revisions. The unfocused group, however, did not outperform the writing practice group in the linguistic accuracy of their revised texts. Nor were there any significant group differences in the post-test. Polio et al concluded that accuracy improves as a result of self-editing without unfocused feedback. The researchers also agreed with Truscott (1996) that providing unfocused correction is time consuming and might not be helpful in the long-term. It is, however, possible that no effect was found for unfocused correction in this study because the experimental group wrote only half as many journal entries as the writing practice group and therefore, the writing practice group cannot be considered a proper control group.

In a similar study, Semke (1984) did not find any supporting evidence for unfocused correction. His study examined the effect of unfocused correction on 141 first-year learners studying German in an American University. The study used a pre-test –treatment – post-test design. There were four treatment conditions – three groups were given unfocused correction, with and without comments, one group received feedback on essay content. The learners in all the groups completed and received feedback on weekly journal entries over a 10-week period. One group received unfocused correction along with the opportunity to revise their writing. A multiple-choice cloze test was also administered to measure initial writing proficiency and showed no group differences. The participants received grades for each composition. For the content groups, grading was done according to the number of words written in each text whereas the ratio of errors to the number of words was calculated to score for accuracy in those learners who received unfocused WCF. The study reported that there were no significant differences between the different unfocused WCF groups and the comment-on-content group in terms of accuracy gains, but the latter made more progress than the unfocused correction groups in general language proficiency - as gauged by the cloze test. In other words, the results showed that unfocused correction neither improved learners' writing skills nor increased their overall language competency. The study design, however, involved different writing practices for the treatment groups. For instance, the writing completed by the comment-on-content group was twice as much as the groups who received unfocused correction or unfocused correction plus comments. Also, the grading criteria Semke used differed between the groups – the unfocused correction group received scores

based on the error ratio while the comment-on-content group was scored in terms of the number of words in writing. Thus, questions arise as to the validity of the results obtained by both the Semke (1984) and Polio et al (1998) studies.

Other studies (Lalande, 1982; Robb et al., 1986; Sheppard, 1992) that reported no effect for unfocused correction did not involve a control group. For instance, Lalande (1982) examined the effect of unfocused correction on the recurrence of errors in the writing of 60 intermediate-level learners learning German as a foreign language at Pennsylvania State University over a period of 10-weeks. The study consisted of two groups, one group receiving direct unfocused WCF – which Lalande called a control group - and the other receiving indirect unfocused WCF. Learners first completed five compositions of 250 words, each within 45 minutes, and then revised their writing after receiving corrections on their second, third and fourth compositions. Feedback involved all lexical, grammatical and orthographic errors. There was no significant accuracy improvement over time for either of the groups. Lalande (1982), however, reported a significant statistical difference for one experimental group as it made fewer grammatical and orthographic errors in the post-test. Also, the learners felt that their writing skills had significantly improved as a result of the feedback even though the statistical results indicated otherwise. A major weakness of this study was that there was no proper control group that received no feedback.

Robb et al. (1986) also examined the effect of different unfocused feedback types on the accuracy of lexical, stylistic and syntactic errors in the writing of 134 EFL first- year Japanese college learners learning English as a foreign language over a period of 7 months. There were four experimental groups that received different types of unfocused feedback. The study did not include a control group. Pre-test scores of the learners showed that all the groups were of a similar proficiency level at the beginning. Learners in all four groups completed 5 composition assignments involving expository, narrative, and descriptive writing and received feedback on all lexical, syntactic, and stylistic errors. Content and organization problems in writing were not corrected. One group that received unfocused (coded) correction revised their writing. All the groups improved in accuracy compared with their pre-test scores but none of the groups showed any significant accuracy gains in the fourth writing task after two months. There were no statistically significant differences among the treatment groups. All the participants also had exposure to extensive grammar instruction,

which may be why there were no group differences. Like Lalande's study, Robb et al.'s study did not include a control group. Therefore, no clear conclusion can be reached regarding whether or not the unfocused feedback was of any value to learners.

Another study that failed to include a proper control group is Sheppard's (1992) study which involved 26 upper-intermediate level learners coming from the Caribbean, Latin America, Europe and Asia and investigated the comparative effect of two feedback conditions on learners' writing over a 10-week period. One group received unfocused corrective feedback plus an opportunity to discuss errors before revising. A second group received comments on content along with the opportunity to ask for clarifications. Sheppard included the content-feedback group as a comparison group. Pre-tests were administered to assess learners' general reading comprehension ability and grammatical knowledge. Both groups received 35 hours of instruction which included grammar lessons. Learners in both the groups read two novels, wrote 7 compositions on the same topic in multi-drafts and received unfocused feedback on verb errors, punctuation and errors in subordinate clauses. The percentage of correct verb forms, sentence-boundary markers and the ratio of the use of subordinate clauses was calculated. Sheppard found that the unfocused correction had no significant impact on grammatical accuracy but had a negative effect on their use of complex sentences. The study concluded that the learners attended to grammatical accuracy even when the primary aim was to communicate a message. However, there are design problems with this study. Bitchener and Ferris (2012) questioned whether the content-feedback group constituted a real control group. They suggested that the students in the comparison group who could request clarification were likely to ask form related questions.

Kepner (1991) investigated the effects of unfocused error correction and content feedback on 60 intermediate college students of Spanish over a period of 12 weeks. The study examined the longitudinal effects of feedback and comments on learners' grammatical accuracy and the quality of content in their writing. There were four student groups with fifteen students in each; students were grouped according to their verbal ability – high or low - based on median splits of their previously ranked English grade-average. Two groups received direct unfocused error correction and other groups were given content-related feedback only. The feedback was administered via eight journal entries completed by students over the semester. All the journal entries received feedback after one or two class

periods. Error correction comprised sentence level errors along with brief notes explaining the corrections. The journal entries produced at week 12 were used to assess message-related content and linguistic errors. A two-way analysis (ANOVA) of variance was conducted to identify group differences. The group that received feedback on linguistic errors did not show a significant reduction in errors ( $M=37.87$ ) when compared with the group that received content feedback ( $M = 44.43$ ). In fact, neither group reduced the number of errors. Nor was there any significant difference in the error counts of both the high and low-level ability groups. Kepner concluded that unfocused correction was of no value for promoting learner accuracy. However, this study has also been criticized. For example, the students who received the corrective feedback were not required to pay attention to the feedback. Given that learner attention to feedback is obviously needed for it to work, Kepner's study cannot be counted as evidence against unfocused correction.

In effect all these studies, although they seemed to indicate that unfocused WCF is ineffective, suffered from a variety of design problems and thus cannot be used to argue against unfocused feedback. I will now turn to consider the second set of later studies, which provide a very different picture. These second set of studies (Bonilla López et al., 2018; Chandler, 2003; Hartshorn et al., 2010; Karrim and Nassaji, 2018; Kurzer, 2018; Van Beuningen et al., 2008; 2012) conducted between 2000 to 2020 avoided many of the design problems of the earlier studies and produced results that give clear support for unfocused WCF.

Chandler (2003) conducted his first study to investigate the effect of unfocused correction using a sample of post-intermediate learners at an American college. The study involved 31 ESL learners who completed five autobiographical essays over a period of 10 weeks and used a pre-test –treatment - post-test design. Feedback was given on 16 error categories – including word form, singular/ plural nouns, word choice, word division, verb tense, verb voice, unneeded additions and omissions, word order, spelling, incomplete sentences, punctuation, capitalization, article, pronoun, repetition. There were two treatment conditions. The experimental group received indirect unfocused (located) WCF consisting of underlining the errors. The learners were given direct unfocused WCF on the errors and then asked to revise their texts. The comparison group also received indirect unfocused (located) WCF but they were not required to revise their writing following the feedback. Thus, the only



difference between the two groups was that the experimental group revised each assignment incorporating teacher corrections before writing the next assignment while the comparison group did all the corrections toward the end of the semester after completing the first drafts of all five assignments. Error rates were calculated. Chandler reported an advantage for the experimental group over the comparison group and thereby refuted the claim that unfocused correction is ineffective. The improvement in error rate from the first assignment to the fifth assignment was statistically significant for the experimental group ( $t = 4.05$ ,  $p = .001$ ) but not so for the comparison group ( $t = -0.90$ ,  $p = .381$ ). This suggests that mere writing practice without corrections did not lead to improved accuracy in subsequent writing. However, Chandler's study did not include a true control group deprived of feedback. His study only showed that immediate unfocused feedback is more effective than delayed unfocused feedback.

Van Beuningen et al. (2008) undertook a pilot study to investigate the efficacy of direct and indirect unfocused WCF on learners' linguistic accuracy on a sample of multilingual students learning Dutch as a second language in secondary schools. Four experimental conditions were included in the study: two experimental groups: (1) a direct unfocused WCF group and (2) an indirect coded unfocused WCF group and two control groups: (3) a group that just practiced writing and (4) a self-correction group. The experimental groups received feedback on nine categories of errors: word order, word choice, spelling, word form, addition or omission of a word, incomplete sentences, capitalization, and punctuation. Both the experimental groups were required to revise their writing after receiving feedback. One control group (writing practice) received neither feedback nor opportunity to revise their writing but was required to write two new tasks. A second control group received an opportunity to self-edit their errors and revise their writing. A repeated measures ANOVA and one-way ANOVAs revealed that the groups' initial proficiency levels were comparable. The results of a repeated measures ANOVA revealed a statistically significant effect for unfocused treatment ( $F(3, 51) = 5.47$ ,  $p < .005$ ). Van Beuningen et al. (2008) reported that the groups receiving unfocused correction – irrespective of whether the correction was direct or indirect - outperformed the other groups not only in the revisions but also in subsequent writing. Overall, unfocused correction was shown to have a lasting effect on learners' accuracy gains.

Van Beuningen et al. (2012) investigated the efficacy of comprehensive correction using the same context, design and tasks as in the pilot study (Van Beuningen et al, 2008). This study included four sessions: a pre-test (week one) – treatment session (week 02) – a post-test (week 03) – a delayed post-test (week 06). The study involved 268 students learning Dutch as a second language in a secondary school over a period of 6 weeks. The students completed three writing tasks on three biology-related topics; (1) butterflies (pre-test), (2) ladybugs (post-test) and, (3) wasps (delayed post-test) and received feedback only on the second task. Feedback was provided on nine error categories including (i) lexical errors: word choice, (ii) grammatical errors: verb tense, singular/plural, word order, incomplete sentences, and addition or omission of a word; and (iii) orthographical errors: spelling, punctuation, and capitalization. The results of an ANOVA showed that all the groups were comparable at the onset of the study. The researchers found that the two experimental groups: direct unfocused WCF ( $p = .005$ ,  $d = 0.63$ ) and the indirect unfocused WCF ( $p < .001$ ,  $d = 0.94$ ) outperformed the control groups in the long-term. The study showed that unfocused correction enhanced the learners' linguistic accuracy in both revisions and new writing.

Karim and Nassaji (2018) also reported positive effects for unfocused correction. They studied 53 intermediate level (ESL) students in Canada over a period of 6 weeks. There were four groups, three experimental groups and one control group. The first and second experimental group received direct unfocused and indirect unfocused correction respectively. The third group received indirect unfocused WCF and metalinguistic explanation. Students completed four narrative writing tasks based on picture prompts, received feedback on grammatical errors in syntax and morphology and on non-grammatical errors (e.g. in word choice, capitalization, spelling, punctuation) and then revised their writing following WCF. All the groups were given 10 minutes to review the corrections which were removed before revising to avoid copying. The accuracy of each text was measured using the ratio of the total number of errors to total number of words. The study demonstrated positive results for the unfocused WCF indicating that comprehensive feedback is an effective pedagogic strategy to help learners improve their linguistic accuracy. The findings of the study also suggested that the comprehensive correction was more effective for 'treatable' errors (i.e. errors that are rule-governed such as past tense *-ed*) than for 'untreatable' errors such as problems in word choice.

Another quite recent study by Bonilla Lopes et al. (2018) also found an advantage for comprehensive correction on both grammatical and non-grammatical accuracy on 139 low intermediate learners in an urban university in Costa Rica over a six-week period. The study involved four experimental conditions: direct unfocused and metalinguistic explanation each focusing either on grammatical errors or grammatical and non-grammatical errors and a control group. Students completed word-opinion essays and correction involved all the linguistic errors (morphological and syntactic features) in word form, word order, agreement, incomplete sentences, additions or omissions, and/or non-grammatical correction involved orthographical errors (i.e. errors in spelling, punctuation, and capitalization). After receiving comprehensive feedback on their grammatical or/and non-grammatical features, students were asked to look over the corrections and, after collecting corrected scripts, revise their writing. The control group studied the initial drafts to self-correct their writing. The study reported that the experimental groups receiving comprehensive feedback outperformed the control groups in accuracy gains and they were better able to improve their grammatical accuracy in the long run than the group receiving no feedback. The study also suggested that the participants were able to handle the attentional demands of unfocused correction.

Viyatkina (2010) investigated the effects of unfocused correction on 66 college-level beginners of German as a foreign language over a period of one semester. The study intended to explore the effect of different unfocused correction methods (direct and metalinguistic methods) on the error rates for different error categories in both the short-term and long-term. The study did not include a control group. The participants completed five paragraph-long compositions over the semester and received feedback on 15 error categories (i.e. correction involved errors in verbs, nouns, adjectives, word choice/order, punctuation and spelling). They were required to type the essays and electronically submitted them to the instructor through the online academic portal, Blackboard. Then they received unfocused WCF electronically. After that, the students revised their initial drafts and re-submitted them for another round of feedback. Following this pattern, the participants completed five two-draft essays. The learners were graded for both grammatical accuracy and content related features. Relative error frequencies were calculated, and a repeated measures ANOVA was computed. The study showed that there was a significant reduction (55%-88%) in errors in verbs, nouns, word order, spelling and structural features in the revised drafts for all the experimental groups that received unfocused error treatment. However, though the study reported short

term effects for unfocused correction, the results for long-term effects were mixed and inconclusive (e.g. although verb related errors did not reduce over time there were fewer noun and word order errors). A limitation of this study was the absence of a true control group.

Some other studies have examined how comprehensive correction can be implemented in ways that enhance their ecological validity. One such promising alternative approach is 'dynamic CF' (WDWCF)<sup>2</sup>. A good example of this is seen in a study by Hartshorn et al. (2010). Their study investigated the effect of 'dynamic WCF' on 47 advanced-low to advanced-mid (ESL) learners at a university in the United States. The intention was to maximize the opportunities for students to improve their writing using an approach that ensures that feedback and writing tasks were meaningful, timely, constant, and manageable - for both students and teachers. The study involved one experimental group and a comparison group. While the students in the experimental group experienced dynamic WCF, the comparison group participated in a traditional process writing course. The students in the former wrote a three or four 10-minute composition each week and received unfocused (coded) correction on it, recorded the errors in an error log, and resubmitted their revised texts to the teacher. This cycle of receiving feedback, editing and re-submitting was repeated until the draft was error free. For the post-test they were asked to complete a 30-minute essay to see whether the effects of the feedback received on the 10-minute compositions were evident in a longer piece of writing. Students in the comparison group simply completed four separate drafts and received comprehensive feedback on each of them. The study reported that the mean accuracy score for the experimental group was higher than that for the comparison group. Hartshorn et al. argued that comprehensive correction is effective.

A similar study was conducted by Evans et al. (2011) on 30 university-matriculated ESL learners in the USA to examine whether the proposed methodology (i.e. dynamic WCF) was applicable to different learning settings. This study was a replication of Hartshorn et al.

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<sup>2</sup> Dynamic WCF refers to the concept that feedback should be provided on the most immediate needs of the learner and feedback should be continuous and interactive in nature. This type of a feedback strategy must adhere to the principle that feedback is meaningful, constant, timely and manageable.

(2010). There were two groups. The comparison group was enrolled in a traditional writing course and the experimental group was exposed to dynamic WCF. The students in the former completed 20 pages of writing, received feedback primarily on rhetorical aspects and also on linguistic accuracy. The learners in the experimental group completed 35 10-minute paragraphs - 3 or 4 paragraphs each week- and received feedback exclusively on linguistic errors in accordance with the 'dynamic' approach. This also involved maintaining tally sheets and error logs, receiving feedback a number of times, rewrites and re-submissions until the final draft was error free. Both the groups completed a pre-test (initial writing) and a post-test (new text). There was a significant improvement in accuracy in the experimental group ( $p = .03$ ) but not in the comparison group. The failure of the comparison group was attributed to the greater cognitive demands of their writing tasks, which required them to address rhetorical aspects of writing. Both this study and that of Hartshorn et al. (2010) suggested that feedback is effective if it manageable, timely, constant, meaningful, and personalized. However, although dynamic WCF (DWCF) is promising, it is labor-intensive for both learners and teachers.

Building on Evans et al., (2010), Kurzer (2018) examined the effect of DWCF across three levels of learners (i.e. beginning, intermediate, and advanced) in a US university. The study included both treatment and control sections. Treatment groups received dynamic feedback in support of a 'traditional' approach to instruction. The control groups were exposed to the traditional grammar instruction and received corrective feedback only on grammar exercises and take-home writing assignments. The study adopted the DWCF coding system (Evans et al., 2010) and included 16 codes, categorized by three error types (i.e. global, local, mechanical). All the groups completed 10 minute - diagnostic paragraphs. It adopted the original DWCF process (writing/re-vising paragraphs each day) based on learners' level. The study found that the students - irrespective of their level – produced more accurate new writing at the end of the term than did the students in the control group. The findings of this study confirm the results of Hartshorn et al. (2010) and Evans et al. (2010).

**2.3.4.3 Type 3: Semi-Focused WCF Studies.** The third type concerns the studies that examined the effect of semi-focused WCF on learners' linguistic accuracy. One such study is Hashemnezhad and Mohammadnejad (2012). The study was intended to compare unfocused

direct and indirect feedback types on the writing of 80 post-intermediate (EFL) learners in an Iranian university over a 16-week period. There were two experimental groups, one receiving direct correction and the other indirect feedback. There was no control group. The study was quasi-experimental. Participants completed a 250-word composition each session and received either direct feedback in the form of crossing out the error and providing the corrections or indirect feedback involving an abbreviated coding system (i.e. *vt* for wrong verb tense). The study reported that WCF was effective with higher accuracy gains in the use of past simple tense, relative pronoun and the prepositions in new writing. The authors reported an advantage for the direct correction group over the other group. This study, however, cannot be considered evidence for or against semi-focused WCF as it did not include a control group to gauge the effect with and without correction.

In Benson and DeKeyser (2019), the participants were divided into three groups, namely, (1) direct focused WCF, (2) metalinguistic feedback and a (3) control group. The study employed a quasi-experimental design involving a pretest - treatment – post-test - delayed post-test. Corrections were directed only at two verb tenses, simple past tense and present perfect tense. The control group received content-comments only. The participants completed four essays, each of which was submitted to a drop box within the LMS (Learning Management System). They then received corrections for first and second essays and revised their essays following feedback within 30 minutes. The study found that the semi-focused feedback could lead to accuracy gains in subsequent writing. Both the treatment groups outperformed the control group in the immediate post-test. However, the study found mixed results in delayed post-test with only one treatment group (direct CF) maintaining long-term accuracy gains greater than the control group.

Another semi-focused study is Bitchener, Young and Cameron (2005). Bitchener et al. (2005) investigated the effect of WCF on 53 post-intermediate level (ESL) migrant learners at a university in New Zealand using a semi-focused approach. The study had a quasi-experimental design involving a pre-test and three feedback treatments, two of which were followed by a post-test after 2 weeks and the last one after 4 weeks. The participants were asked to write an informal letter for each of the four tests. There were three treatment conditions, two experimental groups - one receiving direct feedback in the form of metalinguistic explanation plus a 5-minute oral conference and the other metalinguistic

explanation alone - and a control group receiving feedback on the quality and organization of the content of their writing. They completed four 250-word informal letter-writing tasks in weeks 2, 4, 8 and 12 and received feedback accordingly. The researchers first identified and categorized the errors that appeared in the first writing task and selected the three most frequent errors for treatment - errors in prepositions (29.23%), the simple past tense (regular, irregular and copula of the past tense verb) (11.96%), and the definite article (11.49%). Obligatory occasion analysis was used to obtain accuracy scores. The researchers found that both the experimental groups outperformed the control group on the definite article and the simple past but not in prepositions. They concluded that the feedback worked better for 'treatable' errors (which, in this case, were the errors in the definite article and the simple past) than for the 'less treatable' errors (i.e. prepositions). The researchers also suggested that whether errors disappeared in writing following feedback depended on their complexity and 'treatability'. According to the authors, the accuracy performances of linguistic features may be inconsistent over time, reflecting the nature of the acquisitional process. That is, learners may produce a given feature accurately on one occasion and fail to do so on another in the same linguistic environment. In other words, there was a non-linear pattern of improvement. Bitchener et al. (2005) called for more longitudinal research to examine learner behavior in relation to the effects of corrective feedback.

**2.3.4.4 Type 4: Comparative WCF Studies.** Having reported on the studies that examined the effect of (1) focused, (2) unfocused and (3) semi-focused WCF on learners' linguistic accuracy, I finally consider the studies in the fourth set, which set out to compare the relative effects of focused/unfocused WCF and unfocused/ semi-focused WCF. There have been three studies (Ellis et al., 2008; Frear & Chui, 2015; Sheen et al., 2009) that compared the relative effectiveness of focused and unfocused WCF. Ellis et al. (2008) examined the relative effect of focused and unfocused WCF on the use of English articles in 49 intermediate (EFL) Japanese learners. The study involved two experimental groups: (1) a direct unfocused feedback group, (2) a direct focused feedback group. There was a control group which did not receive WCF. The study was quasi-experimental involving a pre-test, post-test and delayed post-test. The writing tasks involved three different picture compositions. The focused group received corrections on articles and the unfocused group received feedback on other error categories which included articles. The researchers reported that both the focused ( $t(13) = 4.71, p < .001$ ) and unfocused ( $t(14) = 2.90, p < .02$ ) groups

outperformed the control group in gains from the pre-test to post-test but they did not significantly differ in either the short-term or the long-term. Ellis et al. suggested that this might have been because the unfocused correction still included frequent correction of articles. They called for further research where the difference between the focused and unfocused correction was clearer.

To address certain methodological flaws in Ellis et al. (2008), Sheen et al. (2009) investigated the differential effects of focused WCF that targeted the English article system and unfocused WCF that addressed a range of grammatical features (i.e. English articles, copula 'be', prepositions, irregular/regular past tense) on 80 intermediate level students (ESL) in a US college. The study used a quasi-experimental design (pre-test, treatment, post-test and delayed post-test). The participants completed two narrative writing tasks, received feedback and were asked to look over the corrections and revise their writing. The study found that although both the experimental groups improved in accuracy, only the focused WCF outperformed the control group. Sheen et al. (2009) reported that there was no improvement in the unfocused group as the students failed to attend closely to the feedback. However, as acknowledged by the authors, this study also contained certain methodological shortcomings (i.e. the unfocused WCF was not systematic with some errors being corrected and others being ignored). Building on Ellis et al. (2008), Frear and Chiu (2015) examined the effects of indirect unfocused and indirect focused on the accuracy of past tense verbs on a sample of Taiwanese college students. The findings of this study mirrored those of Ellis et al. (2008). These comparative studies have produced mixed results and do not conclusively show that focused WCF is superior to unfocused. Bitchener and Ferris (2012), however, pointed out that the question of the relative effect of these two approaches may well be answered only if it is examined with a focus on other issues (e.g. linguistic error category, interaction of the feedback type).

In their methodological synthesis, Brown and Liu (2015) claim there was a dramatic shift of research interest in examining highly focused WCF from 2005 to 2009 as reflected in a series of studies (Bitchener & Knoch, 2010; Ellis et al., 2008; Sheen, 2007). This shift involved a move from focused to unfocused WCF studies reflecting perhaps a greater concern for ecological validity. Kang and Han (2015) meta-analyzed the effect of WCF on learners' grammatical accuracy and the factors mitigating its effectiveness. This involved 21



primary studies that included 18 published WCF studies and 4 (unpublished) doctoral dissertations in 1980 and later (including 19 after 2000). The data was coded under study characteristics, research design, treatment and effect sizes. The study reported an overall moderate effect size of  $g = .54$  for WCF. Kang and Han reported that the effect size for the focused ( $g = .69$ ) was larger than for the unfocused ( $g = .33$ ). Similarly, Mao and Lee (2020) synthesized 59 WCF studies to identify unresolved issues concerning feedback scope (i.e. the extent to which the L2 teachers responded to learners' written errors). Their synthesis included journal based WCF studies published from 1979 to 2018 and excluded unpublished dissertations, conference papers, non-academic resources and monographs. The selected studies ( $k = 59$ ) were categorized according to their scope, namely, (1) comprehensive WCF studies ( $k = 27$ ), (2) focused WCF ( $k = 21$ ), (3) comparative studies of focused and less focused (unfocused) WCF studies ( $k = 3$ ). According to Mao and Lee (2020), none of the comparative studies provide conclusive answers regarding whether focused or unfocused is more effective for learners. However, they acknowledged that two of the studies (Ellis et al., 2008; Frear & Chiu, 2015) have proved that the difference between the effects of both focused and unfocused approaches are non-significant.

Two recent studies (Pashazadeh, 2017; Rahimi, 2019) compared the effectiveness of unfocused and mid-focused WCF on learners' accuracy gains. Pashazadeh (2017) investigated 116 learners (pre-intermediate) in a school in Iran. The students were divided into four groups: (1) mid-focused group, (2) unfocused group, (3) unfocused + revision group and (4) control group. The learners were asked to read three writing passages and respond to three writing tasks by reproducing the reading passages as closely as possible. The mid-focused group received corrections on the errors in the English article system, the infinitive, and the unreal conditional. Groups 2 and 3 received corrections on a range of grammatical errors including the above three error categories. The control group was given general comments on the content of their writing. They received correction only on the first task. The first, second and third tasks were considered as a pre-test, immediate post-test, and delayed post-test. Obligatory occasional analysis was used to calculate the scores for all three tasks. The results of the study found that the accuracy gains that appeared in the immediate post-test for all three experimental groups disappeared in the delayed post-test. The author, however, acknowledged that the study is not without limitations and, therefore, the findings cannot be generalized. One limitation was the inauthenticity of the writing tasks. The learners were

required to reproduce reading passages and received only one round of feedback. The findings of unfocused WCF studies such as Van Bueningen et al., (2012) which involved only one round of feedback cast doubt on the findings of Pashazadeh (2017).

Rahimi (2019) examined the effect of both highly unfocused/ comprehensive and semi-focused approaches to WCF on 78 intermediate learners of English in a Canadian University over a period of 14 weeks. The participants were randomly assigned to four groups; (1) unfocused + revision, (2) unfocused + non-revision, (3) mid-focused + revision, (4) semi—focused + revision group. The participants completed three 500 word-argumentative essays in response to a text read in the class in weeks 1, 8 and 14. While the first and second groups received coded WCF on all errors, the third and fourth groups received coded WCF on word and sentence errors only. Both the first and third groups were required to revise their writing following corrections while the second and fourth were not. Error coding followed Ferris' error category scheme, namely, verb errors (VE), noun ending errors (NE), article errors (AE), wrong word (WW) errors and sentence structure errors (SSE). All the participants received comments on content and organization of their writing. Revision groups were asked to revise their writing following corrections after a brief discussion about the task topic with the instructor/s. They then resubmitted their revisions for a second review. Some of the students were required to revise their texts for a further time after the second review. The groups that did not revise did more reading activities, pair/group discussions and comprehensive exercises based on the reading texts. Error count in each essay was divided by the number of words and multiplied by the expected number of words (500). The study reported that the semi-focused WCF was significantly more effective than the unfocused feedback in producing high accuracy gains in Task 2. The semi-focused + revision group showed greater accuracy gains than the other three groups in reducing sentence level errors. In line with Ellis et al. (2008), Rahimi suggested that corrections directed at all the errors (linguistic and content problems) in writing are unlikely to foster noticing and the cognitive processing required for L2 acquisition. The unfocused group with opportunity to revise was more successful than the other groups in terms of overall writing quality. However, due to the broad focus on global and complex linguistic issues (and perhaps content and organization issues), the findings of this study do not provide a clear answer as to which type is more effective in terms of reducing errors in general. The author, however, suggested that a semi-focused approach is best suited when dealing with more

complex linguistic features which require more attention. Rahimi further highlighted the need for a more ecologically valid approach to WCF. The study did not include a control group which did not receive WCF and, therefore did not allow any conclusion about the efficacy of one type of WCF over the other.

**2.3.4.5 Summary of Focused-Unfocused WCF Studies.** To conclude, the following is a summary of key findings of these studies.

1. Several studies have reported that focused WCF is effective, durable and robust (e.g. Bitchener, 2008; Bitchener and Knoch, 2010a; Sheen, 2007).
2. Some earlier studies (Kepner,1991; Lalande,1982; Polio et al.,1998; Robb et al., 1986; Semke,1984; Sheppard, 1992), conducted between 1980 to 2000,examined the effect of unfocused WCF and found it had no effect on learners' linguistic accuracy. Most of these studies, however, suffered from methodological problems (e.g. no control group).
3. More recent, better-designed studies (e.g. see Van Beuningen et al., 2012) have found unfocused WCF effective.
4. Some recent studies (e.g. Bonilla López et al., 2018; Hartshorn et al., 2010), which introduced an alternative instructional methodology called 'dynamic WCF', also found unfocused WCF to be effective.
5. A few other studies (e.g. Benson & Dekeyser, 2019; Bitchener et al., 2005; Hashemnezhad & Mohammadnejad, 2012; Rahimi, 2019) examined the effect of semi-focused WCF and produced mixed results.
6. Comparative studies (Ellis et al., 2008; Pashazadeh, 2017; Sheen et al., 2009), which examined the differential effects of focused/ unfocused and semi-focused/ unfocused WCF on linguistic accuracy, have produced inconclusive results.

### **2.3.5 *Direct versus Indirect WCF***

Another key issue in WCF research concerns whether WCF should be direct or indirect. In order to decide which type to include in my own study, I undertook a review of the WCF studies that have examined the relative effects of direct and indirect WCF. In this

section, I will present the reasons for the decision I reached. drawing on examples from relevant research studies.

### **2.3.5.1 Studies Investigating the Relative Effect of Direct and Indirect WCF.**

There are a number of studies that have examined the relative effects of direct and indirect WCF on learners' linguistic accuracy. These studies, however, vary in how direct feedback was operationalized - whether it was focused or unfocused. In my review, I will consider four types of WCF studies that examined the relative effect of direct/indirect WCF: (1) focused direct and indirect WCF on revision, (2) focused direct and indirect WCF on new writing, (3) unfocused direct and indirect WCF on revision, and (4) unfocused direct and indirect WCF on new writing. I have described many of these studies in the previous section (*see* Section 2.3.4) and thus will only discuss what these studies show about the effects of direct and indirect WCF.

#### **1. The effect of focused direct and indirect WCF on revision**

A number of focused WCF studies (Karim and Endley, 2019; Shintani & Ellis, 2013; Shintani et al., 2014) examined the relative effects of direct and indirect WCF on a revised draft. For example, Shintani and Ellis (2013) examined the differential effect of metalinguistic explanation (a type of indirect WCF) and focused direct correction on 49 low university intermediate-level (ESL) learners' revised texts. The study involved a pre-test, corrective treatment, an immediate post-test and a delayed post-test two weeks later. The students wrote three picture composition tasks and received feedback only on the indefinite article. There was a control group which did not receive WCF but was given five minutes to study their writing before revising it. The experimental groups were required to revise their writing after studying the explanations and the corrections. Obligatory occasion analysis was used to measure accurate use of the indefinite article. A repeated measure ANOVA identified a statistically significant difference for time, a time x group interaction and group. The study reported that learners in the indirect group (i.e. metalinguistic explanation) improved significantly in their accuracy of the use of the indefinite article in the revised draft. The accuracy improvements for the Direct WCF group upon revision did not however reach statistical significance.

In another study, Shintani et al. (2014) investigated the effect of direct and indirect WCF on revision and found durable effects for direct WCF. The study included 214 pre-intermediate level learners in a Japanese university. The feedback addressed two different grammatical features; the indefinite article and the hypothetical conditional. The study involved five groups. Two groups received direct WCF, one with the opportunity to revise (DCF+R) and one without this opportunity (DCF). Two other groups received metalinguistic feedback in the form of a handout given to them after they had written their texts; again, one of these groups reviewed their text (MR +R) and the other did not (ME). There was also a control group. All the experimental groups completed three writing tasks and received 5 minutes to look over their corrections before revising. The direct WCF + revision group (DCF+R) outperformed the control group followed by the indirect WCF + R group.

A more recent study by Karim and Endley (2019) reported an advantage for both the feedback conditions on revised texts. They studied 86 learners of English at a United Arab Emirates University over a period of 6 weeks to examine the relative effects of direct and indirect CF conditions. The participants received either direct focused WCF, indirect focused (located) or indirect focused (located) with metalinguistic explanation on the use of prepositions of place. There was a control group which completed the writing tasks without receiving any feedback. The participants completed four writing tasks, received feedback on the first and second tasks (Weeks 1 & 2) and were required to revise their writing. Tasks 3 and 4 (delayed post-tests) were completed in weeks 5 and 6 respectively. The findings reported that both the direct and indirect (located) feedback conditions showed improvements in accuracy on revision in Task 1 but only the Direct WCF group produced greater accuracy gains in Task 2.

## 2. The effect of focused direct and indirect WCF on new writing

The second type of studies (Benson & DeKeyser, 2019; Bitchener & Knoch, 2010b; Karim & Endley, 2019; Shintani & Ellis, 2013; Shintani et al., 2014) concerns the relative effect of these two conditions on new writing. Three of these studies (Karim & Endley, 2019; Shintani & Ellis, 2013; Shintani et al., 2014) produced mixed results. For example, Shintani and Ellis (2013) reported that both the direct and indirect groups outperformed the control group on new writing. However, this study found a stronger effect for indirect WCF (i.e. metalinguistic explanation) which resulted in greater gains in the immediate post-test but not

in the delayed post-test. Shintani and Ellis' failure to find any long-term effect for direct and metalinguistic WCF may be because they focused only on indefinite articles, because the treatment involved only one feedback session or because students received only one or two corrections of their indefinite article errors. The findings of Shintani and Ellis, therefore, do not justify rejecting direct correction especially as other studies (e.g. Bitchener, 2008; Bitchener & Knoch, 2010) that investigated the effect of direct and direct plus oral/written meta-linguistic correction on articles reported a positive effect for direct WCF. Also, Shintani et al. (2014) found a significant effect for the direct CF group on new writing. This study did not report a statistically significant difference for the indefinite article but for the hypothetical condition both direct and indirect WCF treatments showed gains in accuracy in Task 2 with only the effects of the direct CF group (i.e. DCF) apparent in the delayed writing task, suggesting an advantage for direct WCF.

Karim and Endley (2019) also found mixed results for the effect of these two CF conditions on new writing. They reported that both the treatment conditions displayed a reduction in errors in the use of prepositions from Task 1 to Task 2. However, direct WCF was more effective than indirect WCF in Task 3 (after week 5) followed by the indirect (located) WCF group. The indirect WCF group also outperformed the direct WCF in the second delayed post-test (after 6 weeks).

Another two WCF studies (Benson & DeKeyser, 2019; Bitchener & Knoch, 2010b) examined the effect of these two conditions on new writing and reported an advantage for direct correction. Bitchener and Knoch investigated 63 learners (ESL) in a Dutch secondary school. This study included four groups. Two groups received direct focused correction in the form of either direct CF + meta-linguistic explanation or direct CF + meta-linguistic explanation and oral CF. There was another group receiving indirect WCF in the form of circling errors. The study included a control group that did not receive any feedback. Correction involved errors in the English article system. The study included a pre-test (in week one) – treatment (three days later) – immediate post-test - delayed post-test (10 weeks after the pre-test). The participants completed a 30-minute essay for each of the three picture descriptions (a. beach, b. picnic, c. family celebration). Accuracy on each occasion was calculated using the obligatory occasion analysis and a repeated measure ANOVA was computed to identify group differences. Bitchener and Knoch reported that there were short-

term effects for both the direct and indirect feedback conditions, but direct correction produced greater long-term accuracy gains than indirect WCF.

Benson and DeKeyser (2019), which I reviewed in Section 2.3.4.3, also reported results supporting direct correction. This study examined the effects of direct focused WCF and metalinguistic feedback on accuracy of two tenses, simple past tense and present perfect tense. The study included a control group. The study reported that both the treatment groups outperformed the control group in the immediate post-test following treatments. But only the group that received direct correction on simple past tense maintained accuracy gains in the delayed post-test.

### 3. The effect of unfocused direct and indirect WCF on revision

The third type consists of unfocused WCF studies (e.g. Bonilla Lopez et al., 2018; Chandler, 2003; Karim & Nassaji, 2018 ; Robb et al., 1986; Semke, 1984; Van Beuningen et al., 2012; Vyatkina, 2010), all of which I have discussed in Section 2.3.4, that examined the relative effects of direct and indirect WCF types on revision. Of these, two studies (Robb et al., 1986; Semke, 1984) reported no group differences between the direct and indirect WCF groups in a revised draft. However, in both of these studies, only the group that received indirect correction was asked to revise their writing.

Other studies (Karim & Nassaji, 2018; Vyatkina, 2010) compared the effects of these two feedback types and reported that both conditions led to improved accuracy in subsequent revision. Vyatkina (2010) investigated the effects of direct and indirect feedback conditions. Both led to similar improvement on subsequent revised texts. There were limitations of this study. Regarding the direct WCF, for example, the students were only required to accept the suggested correct forms by deleting the error and entering the corrections electronically when revising. This process is very different from revising a complete hand-written text. It is unclear, then, if the results can be generalized to a typical class where students receive feedback and revise manually. A more recent study by Karim and Nassaji (2018) also reported an effect for both these WCF types on revision. The study also included a control group. The study demonstrated that both direct and indirect feedback resulted in significantly greater improvement than the control group in the revised texts.

Other unfocused WCF studies (e.g. Bonilla Lopez et al., 2018; Chandler, 2003; Van Beuningen et al., 2012), which I reviewed in Section 2.3.4, reported positive effects for direct correction on revision. Chandler reported a gain in accuracy for both the feedback types but more so for direct WCF. The participants completed four autobiographical writing tasks and received one of four types of WCF: (1) direct unfocused WCF; (2) metalinguistic (located) coded unfocused WCF; (3) metalinguistic coded unfocused WCF; (4) indirect unfocused WCF. All four groups revised their texts after each treatment session. This study found that the group that received direct CF made significantly fewer errors in their revised drafts. Another study that reported positive effects for direct correction is Bonilla Lopez et al. (2018). In this study, the participants received either direct or indirect feedback on grammatical or/and non-grammatical features and revised their writing without access to corrections. Results demonstrated a significant effect for the feedback condition on revised texts with direct CF group showing higher accuracy gains. Another recent study that examined the relative effects of WCF methods on revision and found an advantage for direct CF is Van Beuningen et al. (2012). In this study, the direct group could correctly repair 78% of errors in their initial writing but the indirect group only 64%.

#### 4. The effect of unfocused direct and indirect WCF on new writing

A number of other unfocused WCF studies (e.g. Bonilla Lopez et al., 2018; Hashemnezhad & Mohammadnejad, 2012; Karim and Nassaji, 2018; Lalande, 1982; Mirzali & Aliabadi, 2013; Robb et al., 1986; Semke, 1984; Van Beuningen et al., 2012; Vyatkina, 2010) examined the relative effects of both direct and indirect WCF types on new writing. All of these studies have been discussed in detail in Section 2.3.4.

Two of these studies (Robb et al., 1986; Semke, 1984) found no significant difference between treatment conditions. Semke's study (1984) found no significant group difference in new writing. However, in a test, the direct corrective feedback group performed better than the other three groups. In a similar study to Semke's, Robb et al. (1986) compared these two types of WCF and concluded that there were no significant differences between treatment conditions as none of the groups improved in the fourth writing task after a break of two months. One possible reason for this may have been because all the students received extensive grammar instruction which may have neutralized any differences in the WCF they received. Thus, the findings of Semke's and Robb et al. (1986) are inconclusive.



Other studies compared the effects of these two feedback types and reported that both feedback conditions failed to produce any gain in accuracy in subsequent writing (Karim and Nassaji, 2018; Vyatkina, 2010). For example, Karim and Nassaji (2018) found no statistically significant difference in accuracy gains between the feedback conditions and the control group in new writing. However, it is possible that no effect was found for direct WCF on new writing because the learners were only allowed to look at the corrections for 10 minutes and could not keep them for reference when they wrote a new text. Allowing learners to keep their corrections may facilitate transfer to a new writing task. Similarly, Vyatkina (2010) did not report any accuracy improvement for either condition in new pieces of writing. Vyatkina pointed to the limitations of all three types of WCF: direct correction only led to mechanical changes and, therefore, did not contribute to learning; indirect correction was only effective for addressing spelling errors and had no effect on grammatical accuracy while metalinguistic clues may have led to incorrect guesses.

Only one Type four WCF study (Lalande, 1982) found evidence supporting indirect correction. Lalande's study – which I have described in detail in Section 2.3.3 - examined the effects of direct unfocused WCF and indirect unfocused WCF. The study found that the indirect WCF group outperformed the direct CF group, making fewer grammatical and orthographic errors (capitalization, spelling and punctuation). Lalande reported a significant group difference in the post-test (there was no difference in the pre-test). This led him to advance some theoretical arguments in favor of indirect WCF. He suggested that the indirect WCF not only prompted learners to engage in the process of 'problem-solving' and 'self-editing' their own writing but it also provided opportunities for them to engage in guided learning and, by doing so, promoted long-term acquisition. However, whether or not Lalande's study qualifies as a sound comparative study is questionable as the indirect WCF group was able to consult with their teacher or peers and was required to maintain an error log whereas the direct WCF group was not able to do this. Another methodological shortcoming in this study is that there was no control group that did not receive any feedback and no delayed post-test to examine whether the effects of WCF were durable.

A number of more recent studies (Bonilla Lopez et al., 2018; Hashemnezhad & Mohammadnejad, 2012; Mirzali & Aliabadi, 2013; Van Beuningen et al., 2012) found an advantage for direct CF on accuracy in new writing. Hashemnezhad and Mohammadnejad

(see Section 2.3.4 for a detailed review) compared the effect of unfocused direct and indirect feedback types on the writing. The participants received either direct feedback in the form of crossings out of errors and providing the corrections or indirect feedback involving an abbreviated coding system (i.e. *vt* for wrong verb tense). The study reported that direct feedback resulted in higher accuracy gains in the use of past simple tense, relative pronouns and the prepositions in subsequent writing. Direct correction was found to be especially beneficial for advanced learners. Similarly, Mirzali and Aliabadi (2013) also reported an advantage for direct correction. The study involved 120 advanced-level (EFL) learners in a genre-based instructional writing programme at an Iranian institution. The study adopted a quasi-experimental design with a pre-test, treatment and a post-test. There were two experimental groups, one receiving direct correction and the other indirect correction. Both the groups received feedback on composition quality and genre. The authors employed a quality marking scheme involving five basic categories (i.e. organization, content, vocabulary, language use, and mechanics of writing) and a scoring scheme based on eleven letter writing moves. The participants first received training in how to compose an application letter. During the practice sessions, they received explicit instructions on the letter genre. Then, they wrote two letters. In the case of direct WCF, linguistic feedback was directed at erroneous and missing forms. In keeping with Ellis (2009), indirect correction consisted of indicating errors but not their exact location. The participants were also required to look over the corrected drafts and incorporate the corrections into their compositions. The direct feedback group showed greater accuracy gains than the indirect feedback group, especially the more proficient learners. Another recent study conducted by Bonilla Lopez et al. (2018) also reported an advantage for direct WCF. This study demonstrated that both direct and indirect feedback conditions were effective for improving short-term grammatical and non-grammatical accuracy but direct correction appeared to be the more effective method for enhancing both grammatical and non-grammatical accuracy in the long-term.

A recent study by Cheng and Zhang (2021) examined the comparative effect of non-native (NNES) and native (NES) English speaking teachers' feedback on 80 EFL Chinese learners of English. The students received comprehensive direct and indirect feedback on both local and global errors in writing. Both NES and NNES teachers used direct comprehensive feedback when treating local errors and indirect feedback on global errors. The study found that direct comprehensive feedback benefitted students' writing.

Arguably, the best comparative study to date is Van Beuningen et al. (2012). This study also points to an advantage for direct correction. Van Beuningen et al. found that the two experimental groups outperformed the control groups in both the short-term and long-term. The study also reported that the effects of direct WCF treatment extended from the initial to the subsequent writing tasks indicating that it was more effective than the indirect treatment in promoting grammatical accuracy in the long term. However, non-grammatical elements benefitted most from the indirect feedback while direct correction was more effective in the case of grammatical accuracy. Van Beuningen et al. suggested that learners need to have a high level of metalinguistic knowledge for indirect feedback to work.

To sum up, I reviewed a number of WCF studies that compared the effect of direct and indirect WCF on revision and new writing and the summary is below.

#### 1. The effect of focused direct and indirect WCF on revision

i. Some focused studies reported mixed results on subsequent revision – supporting either direct WCF (Shintani et al., 2014), indirect WCF (Shintani & Ellis, 2013) or both treatment conditions (Karim & Endley, 2019).

#### 2. The effect of focused direct and indirect WCF on new writing

i. While two focused WCF studies (Karim & Endley, 2019; Shintani et al., 2014) found an advantage for direct WCF on subsequent writing in the long-term (i.e. delayed post-test), one study (Shintani & Ellis, 2013) reported short-term effects for indirect WCF.

ii. Other focused WCF studies (Benson & Dekeyser, 2019; Bitchener & Knoch, 2010b) demonstrated a long-term effect for direct correction over indirect WCF on new writing.

#### 3. The effect of unfocused direct and indirect WCF on revision

i. While two studies (Robb et al., 1986; Semke, 1984) found no significant difference for either of the treatment conditions on subsequent revision, other unfocused WCF studies (Karim and Nassaji, 2018; Vyatkina, 2010) reported that both feedback conditions led to accuracy gains.

#### 4. The effect of unfocused direct and indirect WCF on new writing

- i. Some unfocused WCF studies (Karim & Nassaji, 2018; Robb et al., 1986; Semke, 1984; Vyatkina, 2010) found no significant difference between the treatment conditions on new writing.
- ii. While only one unfocused WCF study (Lalande, 1982) found an advantage for indirect WCF on a new piece of writing, other more recent studies (Bonilla Lopez et al., 2018; Hashemnezhad & Mohammadnejad, 2012; Mirzali & Aliabadi, 2013; Van Beuningen et al., 2012) reported an advantage for direct CF.

Overall, however, the research to date indicates that direct WCF is more effective than indirect WCF. These studies vary enormously in how direct/indirect feedback was operationalized, whether it was focused or unfocused, and in other aspects such as the instructional contexts, the proficiency level of learners, what techniques were involved to attract learner attention (e.g. revision, discussion, etc.), the frequency of feedback sessions and the type of genre involved in the writing tasks used. However, studies involving pre-intermediate level learners (e.g. Shintani et al. 2014), intermediate level learners (e.g. Bonilla Lopez et al., 2018, Van Beuningen et al.2012), advanced level learners (e.g. Chandler, 2003; Hashemnezhad & Mohammadnejad, 2012; Mirzali & Aliabadi, 2013), and both focused correction (e.g. Shintani et al., 2014) and unfocused correction (e.g. Van Beuningen et al., 2012) in very different instructional contexts, reported an advantage for direct correction over the indirect.

The claim that direct WCF is beneficial is also supported by a number of reviews and meta-analyses. For instance, Kang and Han (2015) reported a higher effect size for direct feedback ( $g = .59$ ) than that for indirect feedback ( $g = .36$ ). Similarly, the methodological synthesis of Liu and Brown (2015) found that providing direct correction (66%) was more popular than other indirect feedback types - indirect coded feedback (41%), indirect located feedback (23%) and written meta-linguistic feedback (11%). Van Beuningen's (2010) critical review of WCF studies also reported that empirical studies indicated that direct CF is more advantageous than the indirect CF for grammar as the former provides explicit information that is required for cognitive functions such as hypothesis testing (e.g. Bitchener & Knoch, 2010b).

The studies reveal a number of issues that need to be considered in deciding which type of WCF to use in my study. Indirect WCF might be useful to improve self-editing skills but it demands higher cognitive skills. Provided that the students are at the right proficiency level with enough linguistic skills to work out the errors in their writing and given proper training in the use of self-editing strategies (Ferris & Hedgcock, 2006), indirect WCF strategy can be effective. However, this strategy is not practical for students in my instructional context as (1) most of them are of intermediate proficiency level and (2) they are more familiar with direct correction methods. Direct correction does not require high linguistic competence to work out the nature of the erroneous form. Therefore, I decided to investigate direct WCF in my study.

### ***2.3.6 Short-Term versus Long-Term Studies***

This section deals with the short-term and long-term studies that examined the effect of WCF on learners' accuracy. The bulk of WCF studies conducted to date have been short-term (i.e. involving just one or two WCF sessions). 'Long-term' research is research conducted over multiple periods of time (Guenette, 2007). In my review, I will, therefore, consider 'short-term' as studies involving a single WCF episode and 'long-term' as involving five or more WCF episodes.

A number of recent WCF studies (e.g. Bitchener, 2008; Bitchener & Knoch, 2008; 2010a; Van Beuningen et al., 2012), all of which have been reviewed previously, examined the effect of a single feedback episode on learners' linguistic accuracy. All of these studies have shown positive effects for a one treatment session. In particular, one-shot focused WCF studies (Bitchener & Knoch, 2008; 2010a; 2010b) have shown WCF to be effective. A series of studies conducted by Bitchener (2008) and Bitchener & Knoch (2008; 2010a) examined the effect of different types of direct WCF on learners' use of the English article system (the indefinite article 'a' and the definite article 'the'). They adopted a quasi-experimental design involving pre-test – treatment – immediate post-test – delayed post-test/s. These studies indicate that one-shot of WCF can lead to improvement in the accuracy of the use of target structures in the delayed post-test/s. Shintani et al. (2014) also investigated the effect of focused WCF on learners' use of the English indefinite article in a pre-test – treatment - immediate post-test - a delayed post-test design. They reported long-term effects for focused WCF after 5 weeks. Suzuki et al. (2018) examined the effects of one-shot feedback on the

indefinite article and found it to be effective over a period of four weeks. Van Beuningen et al. (2012) also reported long-term effects – this time for comprehensive correction.

A number of early unfocused WCF studies investigated the effect of multi-shot feedback. These studies differed in the way the study was carried out, the frequency of the feedback and research findings. Kepner (1991), Polio et al. (1998), Robb et al. (1986), Semke (1984), and Sheppard (1992), all of which I have discussed in Section 2.3.4.2, failed to provide positive support for long-term effects of WCF. For example, Semke (1984) examined the effects of WCF over a period of 10 weeks, failing to find any advantage for the WCF group over the comment-on-content group. The study involved 9 iterations of feedback. Another longitudinal study that investigated the efficacy of unfocused WCF and found no advantage for WCF is Robb et al. (1986). This study included 5 shots of feedback. Both Semke and Robb et al. required learners to revise their writing following each feedback session but failed to report any effect for either of the treatment conditions. There are three other studies (Kepner, 1991; Polio et al., 1998; Sheppard, 1992) that examined the longitudinal effect of unfocused WCF. Both Sheppard and Polio et al. administered 7 shots of feedback over a period of one semester. Polio et al. required learners to revise following WCF. Both of the studies, however, failed to report any improvement in accuracy for the unfocused WCF. Similarly, Kepner (1991) examined the effect of WCF involving six feedback episodes over a period of one semester and found no long-term effect for the WCF conditions.

There are a few longitudinal studies (Evans et al., 2011; Hartshorn et al., 2010) that have reported positive effects for WCF. Hartshorn et al. (2010) investigated the long-term of effect of unfocused WCF involving a feedback method called dynamic WCF (DWCF). This study involved 3-4 weekly feedback sessions over one semester. The participants completed three or four 10-minute paragraphs each week and received DWCF until their writing was error free. Replicating Hartshorn et al.'s study, Evans et al. (2011) also examined unfocused WCF over a period of 13 weeks. Both of these longitudinal studies found positive effects for WCF.

I have discussed a number of short-term and long-term WCF studies in my review, the findings of which can be summarized as follows:

1. Short-term studies

One-shot studies have typically used an experimental design involving pre-test – treatment – immediate post-test – delayed post-test. A number of focused WCF studies involving just a single feedback session (e.g. Bitchener, 2008; Bitchener & Knoch, 2008; 2010a; Shintani et al., 2014) have shown WCF has durable effects. Some recent unfocused WCF studies (e.g. Van Beuningen et al., 2012) found that the effects of a single feedback session can lead to improved accuracy in both revision and new writing.

## 2. Long-term studies

Some early long-term unfocused WCF studies (Kepner, 1991; Polio et al. 1998; Robb et al., 1986; Semke, 1984; Sheppard, 1992) that examined the effect of multi-shot feedback failed to demonstrate an advantage for WCF. These unfocused WCF studies were methodologically flawed (e.g. there was a lack of a proper control group). A few long-term studies (Evans et al., 2011; Hartshorn et al., 2010) examined the effect of multi-shot feedback and found a long-term effect for WCF. There is an obvious need for more long-term research to examine the real potential of unfocused WCF involving multi-shot feedback (Ellis et al., 2008; Van Beuningen et al., 2012). Some researchers have also argued that ‘longitudinal research’ is one of the most promising research directions in SLA (Guenette, 2007; Liu & Brown, 2015) because it can show the L2 developmental pathways that learners follow (Duff, 2006) by revealing how learners’ errors change over time (Ellis, 2003). For these reasons, I decided to investigate the long-term effect of correction involving ten episodes of feedback over a period of 14 week

## 2.4 Revision Following WCF

### 2.4.1 Introduction

Over the past few decades, many educational researchers have emphasized the importance of adopting a process-oriented pedagogy (i.e. the process approach) in writing instruction (Beason, 1993; Hyland & Hyland, 2006a; Weigle, 2014). The process approach to L2 writing, encourages learners to proceed through multiple stages of writing and reflection. This includes producing more than one draft of each text, receiving corrective feedback and then revising. Thus, revision following WCF is considered an important instructional strategy by many L2 instructors and SLA researchers. One of the key concerns in WCF research is whether revision followed by WCF is worthwhile or contributes to improving L2 linguistic accuracy and acquisition. This led me to undertake a review of studies that have examined the

effect of WCF + revision. In this section, I will first present the different theoretical arguments for requiring writers to revise and consider the different ways of including revision in WCF studies. I will then review the results of research that investigated including revision in the design of a WCF study and discuss possible gaps.

#### **2.4.2 Revision**

Revision involves requiring students to generate a new draft incorporating corrections. In the case of process writing, ‘revision’ was considered the act of rethinking the content in a second draft (i.e. making changes to content) while “editing” involved the act of correcting surface level errors in grammar, spelling, punctuation (i.e. making changes to form). Advocates of process writing suggest that revision and editing should be carried out separately; that is, students should first produce revised drafts addressing content problems and then edit for language related problems in two different phases. Even though these ‘cycles of revision’ are assumed to be effective (Zamel, 1985), the practicality of asking students to constantly produce multiple drafts of the same draft has been questioned (e.g. Hedge, 2000). This has led to many writing instructors addressing content and form in the same draft.

SLA researchers primarily examined the contribution of WCF in the process of editing or revising to address ‘the learning-to-write’ dimension of writing (i.e. the development of writing skills) (see Leki, Cumming, & Silva, 2008). This focus in SLA research gradually shifted to ‘the writing-to-learn’ dimension where the focus is on the potential of WCF for developing learners’ interlanguage (Manchón, 2009; Santos et al., 2010). However, doubts remain as to whether students attend to the feedback and process it systematically when they are given WCF without asking them to attend to it by revising. For example, Cohen and Cavalcanti (1990) reported that adult Brazilian EFL learners received feedback but did not know how to handle or process it systematically. The less proficient learners expressed a need to revise their writing following WCF. Arguably, asking students to revise after receiving feedback will require students to attend to the feedback which in turn may facilitate their L2 language development.

Ellis (2010) proposed that asking students to revise following WCF served as a technique to prompt the ‘attention’ and active ‘learner engagement’ that are required for

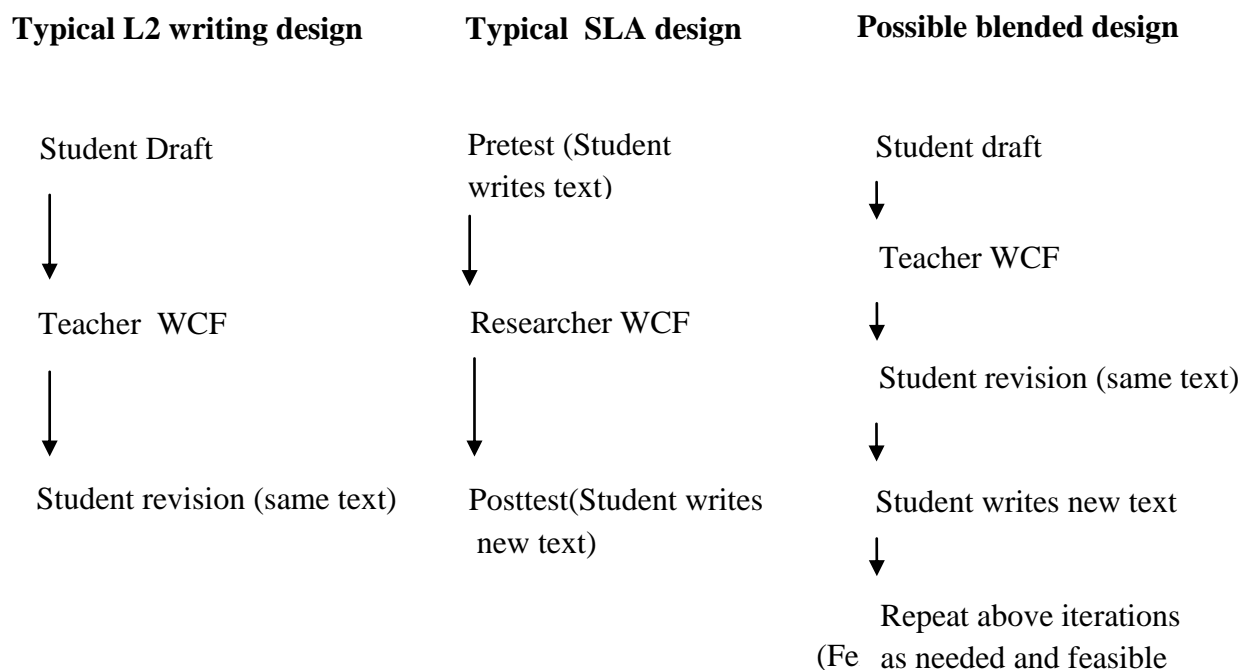


feedback to be effective. If WCF is to have an effect on acquisition, irrespective of the type of feedback, learners need to attend to it. As discussed earlier, Schmidt (2001) emphasized the value of ‘attention’ in SLA suggesting that it provides opportunities for learners to ‘notice the gap’ between their ‘interlanguage’ and the target language input (Schmidt & Frota, 1986) by pushing them to make a cognitive comparison (Ellis, 1994). That is, the task of revising involves learners comparing their initial error and the suggested correction, leading to ‘pushed output’. Truscott (1999), however, pointed out that revision does not constitute evidence of learning. However, recent SLA studies (Shintani et al., 2014; Van Beuningen et al., 2012) reported that revision can enhance the effects of WCF on accuracy as demonstrated in subsequent writing. Revision is, therefore, an important strategy that writing instructors can use to induce learners’ attention to feedback and facilitate uptake of the feedback.

**2.4.2.1 Different Ways of Conducting Revision in WCF Studies.** Several WCF researchers have included revision in their studies but differed in how they included it. Some studies (Fathman & Whalley, 1990; Ferris and Robert 2001; Truscott and Hsu, 2008) allowed learners access to the corrections they were given while rewriting. For example, Van Beuningen et al. (2012) asked students to simply copy their initial texts incorporating all the corrections. Other studies (Karrim & Nassaji, 2018; Lopez et al., 2018; Shintani & Ellis, 2013) asked participants to review the corrections of their first drafts and then revise without access to the actual corrections. Karrim and Nassaji (2018) argued that not having access to corrections prevents students from copying the corrections.

WCF studies that included a revision stage also differed in a number of other ways. Shintani et al. (2014) and Zusuki et al. (2018) required students to revise their first drafts and then immediately write a new piece of writing without having access to either their revisions or original drafts. Other studies (Bonilla López et al., 2018; Van Beuningen et al., 2012) asked learners to complete a new writing task a week after revising the original draft. Also, while some revision studies provided multiple opportunities to revise following WCF (Chandler, 2003; Evans et al., 2011; Hartshorn et al., 2010; Viyatkina, 2010), other studies involved only a single revision opportunity (Bitchener et al., 2005; Van Beuningen et al., 2012).

**2.4.2.2 WCF Research Designs Incorporating Revision.** Ferris (2010) presented three possible WCF research designs: (1) the typical L2 writing design (with revision), (2) the typical SLA design (no revision phase) and (3) the blended design (revision followed by writing a new text). *See* Figure 3.

**Figure 3***Possible WCF Research Designs*

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The first design involves examining the effect of WCF on revision and fits the process-oriented writing approach (*see* Fathman & Whalley, 1990). The second design is found in many SLA studies (Bitchener & Knoch, 2008; Ellis et al., 2008) that do not include revision as part of the study but instead require students to produce an initial text (the pre-test), and, after receiving WCF (treatment), complete a new text (the immediate post-test) and sometimes a subsequent new text (the delayed post-test). However, one reason for incorporating revision in the design of a WCF study is to see whether revision following WCF has a beneficial effect on writing accuracy in the post-test. This led to the blended design (as in Shintani et al., 2014; Van Beuningen et al., 2012) which includes revision following WCF before the production of a new text. Researchers can assess the effect of revision in conjunction with WCF on new writing. Liu and Brown (2015) in their methodological synthesis of 44 WCF studies, included revision as one of the design features specific to WCF studies. They reported that 55% of the studies required students to revise their writing following WCF and they saw not requiring learners to revise their writing as a methodological limitation.

### ***2.4.3 Studies Investigating Revision Following WCF***

The following review of WCF studies considers three different types of studies: (1) studies that have investigated the effect of WCF on revision of the same text (i.e. the typical L2 writing design), (2) revision studies that have examined whether the effects of WCF plus revision extend to subsequent writing (i.e. the blended design), and (3) revision studies that have compared the effects of WCF with and without opportunity to revise on writing accuracy in subsequent writing.

Table 11 provides brief summaries of the studies in these three categories. Many of these studies have been considered previously and so will not be summarized in detail in the review that follows. Instead I will focus on what these studies showed about the effect of asking learners to revise following feedback.

**Table 9***Summaries of Three Types of WCF Studies Involving Revision*

<b>Type</b>	<b>Study</b>	<b>Participants</b>	<b>Groups</b>	<b>How revision was devised</b>
<b>Type 1</b>	Fathman and Whalley, 1990	72 ESL students at a college in America	1)Unfocused indirect (located) CF (2)Content feedback (3)Content feedback with unfocused (located) CF (4) Control group	All the groups revised their writing
	Ashwell (2000)	50 learners in a Japanese University	(1)Content-then-form (indirect) feedback (2) Form-then-content (3)Content plus form feedback (4) No feedback group	All the groups revised their writing
	Lee (1997)	141 low intermediate-level (EFL) learners at a Hong Kong University	(1) Direct Unfocused (2)Indirect Unfocused (3)No feedback group	All the groups revised their writing
	Truscott and Hsu (2008)	47 (EFL) learners at a Taiwanese university	(1)Indirect Unfocused (2)No feedback group	All the groups revised their writing
	Ferris (1997)	47 advanced (ESL) learners at a university in	Groups receiving marginal and end text comments, in-text underlying of	All the groups revised their writing

		California	grammatical errors	
Ferris (2006)	92 ESL learners at an American university		(1) Unfocused indirect (coded) feedback	All the participants revised their writing
Ferris and Roberts (2001)	67 ESL learners at an American university		(1)Unfocused metalinguistic coded WCF (2)Indirect unfocused located WCF (3)No feedback group	All the groups revised their writing
Sachs and Polio (2007)	15 high intermediate level learners at an American university		(1)WCF group (2)Reformulation group	All the groups revised their writing
Suzuki, Nassaji and Sato (2018)	88 intermediate level (ESL) learners in a Japanese University		(1) Direct WCF with metalinguistic explanation (2) Direct WCF (3) Indirect WCF with metalinguistic explanation (4) Indirect WCF	All the groups were given 5 minutes to look over the corrections and they then revised their writing with no access to corrections.
Karim and Nassaji (2018)	53 intermediate level (ESL) students in Canada		(1) Direct CF (2) Indirect (Underlying) (3) Indirect (Uniderlying+metalin guistic cues) (4) No feedback group	All the groups revised their writing and did not have access to corrections when revising.

	Van Beuningen et al. (2012)	268 students learning Dutch as a second language in a secondary school	(1)Direct CF (2)Indirect CF (3)Self-correction group (no feedback) (4)Writing practice (no feedback)	Group (1), (2) and (3) revised their writing.
<b>Type 2</b>	Semke (1984)	141 first-year students of German in an American University	(1) Unfocused Direct CF (2)Unfocused Direct CF and comments (3)Unfocused Indirect (coded) CF (4)Content-comments	Indirect(coded) group only revised
	Polio, Fleck and Leder (1998)	65 ESOL learners at Michigan State University	1) Unfocused direct CF (2)Control Group	Only the group receiving unfocused WCF revised their writing
	Lalande (1982)	60 intermediate-level students learning German as a foreign language in a Pennsylvania University	(1)Direct unfocused WCF (control group) (2) Indirect unfocused WCF(metalinguistic coded)	Both the groups revised their writing following WCF
	Robb, Ross and Shortreed (1986)	134 (EFL) first- year Japanese students	(1) Unfocused Direct CF (2)Unfocused Indirect (coded) CF	All the groups revised

		learning English as a foreign language in a college	(3) Unfocused Indirect CF (4) Unfocused Indirect marginal CF	
Truscott and Hsu (2008)	47 EFL students in a Taiwanese University		1) Unfocused Indirect (located) CF (2) No feedback group	All the groups revised
Liu (2008)	12 ESL students in a USA university		(1) Direct unfocused WCF (2) Metalinguistic Explanation	All the groups revised
Chandler (2003)	36 post-intermediate level (ESL) students in an American college		(1) Direct unfocused WCF (2) Metalinguistic (located) WCF (3) Metalinguistic (code d) WCF (4) Indirect unfocused WCF.	All the groups revised
Bonilla López et al. (2018)	139 low intermediate learners in a university in Costa Rica		(1) & (2) Direct unfocused WCF (3) & (4) Metalinguistic explanation (5) No feedback group	All the groups revised but did not have access to corrections
Shintani and Ellis (2013)	49 low intermediate-level (ESOL) learners in a university in		(1) Direct focused WCF (2) Metalinguistic explanation (3) No feedback	All the groups revised but the experimental groups did not have access to corrections



		the USA	group.	
	Hartshorn et al. (2010)	47 advanced-low to advanced-mid (ESL) learners at an American University	(1) Indirect unfocused group (2) No feedback group	Only the first group revised
	Karim and Nassaji (2018)	53 intermediate level (ESL) students in Canada	(1) Direct CF (2) Indirect (Underlying) (3) Indirect (Underlying+metalinguistic cues) (4) No feedback group	All the groups revised their writing and did not have access to corrections when revising.
	Van Beuningen et al. (2012)	268 students learning Dutch as a second language in a secondary school	(1) Direct CF (2) Indirect CF (3) Self-correction group (no feedback) (4) Writing practice (no feedback)	Group (1), (2) and (3) revised their writing.
<b>Type 3</b>	Chandler (2003)	31 (ESL) post-intermediate students at an American college	(1) Indirect CF group (errors underlined)+Revision (2) No feedback group (comments on content)	Both the groups revised, the experimental group revised immediately after the feedback and the control group revised at the end of semester after completing all the

				drafts
	Shintani, Ellis and Suzuki (2014).	214 pre-intermediate level learners in a Japanese university	(1) Direct CF +revision (2) Direct CF – revision (3) Indirect(metalinguistic ) CF +revision (4)Indirect (metalinguistic) CF – revision (5) No feedback group	Only the first and third groups revised their writing
	Rahimi (2019)	78 intermediate French (ESL) learners of English in a Canadian University	(1)Unfocused + revision (all errors) (2)Unfocused with no revision (3)Semi-Focused +Revision (word and sentence errors) (4)Semi-Focused with no-revision	Only the first and third groups revised.

**2.4.3.1 Effects of WCF on Revision.** I will first consider Type 1 studies (Ashwell, 2000; Fathman & Whalley, 1990; Ferris, 1997; Ferris, 2006; Ferris & Roberts, 2001). These studies addressed whether WCF helps learners self-edit and develop improved texts. They showed that revising a text following WCF can lead to improved accuracy of the same draft. For example, Fathman and Whalley (1990) found feedback to be effective for improving content and linguistic accuracy in revisions of the same texts. They investigated the effects of indirect unfocused WCF, content-comments and unfocused (located) WCF plus content comments on 72 ESL students at a US college. There was a control group which did not

receive any feedback. All of the groups revised their writing without access to their corrections when writing a new text. Fathman and Whalley found that both feedback groups significantly reduced the number of errors they made in writing more than the control group. The students showed improvement in both form and content in their revised texts even when they received no content feedback. The researchers argued that this suggested that both revision and editing can be dealt in one phase.

Ashwell (2000) examined the effect of (i) a content-then-form feedback pattern, (ii) a form-then-content pattern and (iii) a content plus form feedback pattern on the revisions of 50 learners in a Japanese University. The students completed four compositions. There was a control group that did not receive any feedback. All the groups revised their writing. Overall, the study found that the students made 88.1% of changes based on form feedback and 57.4% of changes following content feedback. The findings also indicated that the students relied more on form feedback than content feedback when making changes. Ashwell concluded that the students primarily acted on the linguistic feedback in their revisions regardless of when they received it.

Roberts and Ferris (2001) carried out a study with 67 ESL learners involving two WCF conditions: unfocused metalinguistic feedback and unfocused indirect WCF. There was a control group that did not receive any feedback. The students completed a 50 minute-diagnostic essay, received feedback and were required to revise their texts. The study reported that the students receiving WCF outperformed the control group when revising. It also showed that the WCF groups showed a higher rate of improvement in 'treatable' errors (e.g. verbs, articles, noun endings) than in 'untreatable' errors (e.g. sentence structure, word choice). While the group that received no feedback performed better when editing word choice errors and sentence structure errors, the group receiving indirect correction self-edited more than half of their overall grammatical errors. This led Roberts and Ferris to suggest the importance of revision for developing self-editing skills.

Ferris (2006) conducted a study of 92 ESL learners at an American University over a period of 15 weeks. The study examined the effect of teacher corrections on learners' revisions. The participants completed four essays based on assigned readings and received indirect unfocused (coded) feedback on 15 error categories. They were then required to revise

their writing following feedback. There was a strong relationship between teachers' corrections and students' revisions with Ferris concluding that revision was an effective tool.

Truscott and Hsu (2008) carried out research on 47 (EFL) learners at a Taiwanese university. The students completed two narrative tasks based on a picture sequence and revised their writing. Those who received WCF had access to the corrections when revising. Other learners revised without receiving feedback on their original draft. The error rate for each piece of writing was calculated by dividing the total number of errors by the total word count. The study reported that feedback led to fewer errors in the revised text.

Lee (1997) examined the students' ability to revise successfully following different types of feedback. The study included 141 low intermediate-level (EFL) learners at a university in Hong Kong. The students were given either direct unfocused or indirect unfocused WCF on an article seeded with 20 grammatical errors. There was a control group that did not receive any feedback. All the groups revised the article. Mean scores based on the number of successfully corrected errors were calculated. Those students who received WCF showed greater improvement in their revised texts than the control group.

Ferris (1997) examined the effects of teacher indirect and direct WCF on the learners' revisions of 47 advanced (ESL) learners at a university in California. Ferris reported that the teacher's feedback comments led to substantive and effective revisions. She also found that approximately 78 % of end note-comments and nearly 68% of the marginal comments led to linguistically accurate revisions. This study showed that: (1) the students attended closely to the teacher's feedback and (2) by doing so made substantial and effective revisions. Ferris suggested that asking students to revise after receiving feedback encourages them to reflect on the feedback, giving them the choice of ignoring or accepting the suggestions made by the teacher.

Sachs and Polio (2007) examined the effects of unfocused direct WCF and reformulation on the revised texts of 15 high intermediate level learners at an American university. The students completed a picture description and received either WCF or reformulation on their writing. The WCF group reviewed corrections while the reformulation group compared their stories to a reformulated version before revising. The participants did not have access to their corrections/ reformulated text when revising. Those students who

received WCF showed greater improvement in linguistic accuracy in their revisions than those who had received the reformulated text.

Other more recent studies (Karrim and Nassaji, 2018; Suzuki et al., 2018; Van Beuningen et al., 2012) have studied the effects of WCF on revision and found it to be effective. For example, Suzuki et al. (2018) examined the effect of different feedback types on learner revisions. The study did not include a control group. The students first received feedback then were asked to go over the corrections. They revised their writing without access to the corrections. All the experimental groups significantly increased their accuracy of the target linguistic forms (past perfect tense and indefinite articles) in the revised texts with the direct correction groups outperforming the other groups.

Karim and Nassaji (2018) examined the effect of revision following direct or indirect unfocused feedback. Before revising their writing, the students were asked to review the corrections for ten minutes. The corrections were then taken away and the students given a photocopy of their initial writing to revise. There was a control group that revised without the benefit of any feedback. All the experimental groups outperformed the control group. The study showed that the feedback type had a significant effect on revision; the students who received direct WCF performed better than the students who received other feedback types. The researchers also reported that WCF was more effective for revising grammatical errors than non-grammatical errors.

Van Beuningen et al. (2012) examined whether comprehensive feedback enabled learners to improve accuracy in a revision of an initial text and, if so, how effective it was as an editing tool. The study involved two control groups that did not receive any WCF - one was asked to write a new task with no opportunity to revise their initial writing, the other was required to self-correct the original text. The study found that both the groups that received WCF successfully corrected 78% (direct group) and 64% (indirect groups) of their initial errors in their revisions. Van Beuningen et al. reported that the higher-level students in both the control treatments benefitted, with the self-correction group outperforming the writing practice group in eliminating both grammatical and non-grammatical errors.

Irrespective of differences in the design of these studies, it is clear that the provision of WCF led to accurate revisions. Below is a summary of the findings of these studies.

- 1) Early studies have shown that revising a text incorporating WCF can help learner self-edit and improve the accuracy of the same draft (Ashwell, 2000; Fathman & Whalley, 1990; Ferris, 1997; Ferris, 2006; Ferris & Roberts, 2001).
- 2) Some of the more recent studies (Karrim & Nassaji, 2018; Suzuki et al., 2018; Van Beuningen et al., 2012) that examined effects of WCF on revision found it to be effective.
- 3) There is also evidence that both direct and indirect WCF lead to improved accuracy in revision but direct WCF has the greatest effect. (Karrim & Nassaji, 2018; Suzuki et al., 2018; Van Beuningen et al., 2012).
- 4) Some studies have also shown that WCF can lead to accurate revisions irrespective of whether students have access to corrections when revising (Karrim & Nassaji, 2018; Sachs & Polio, 2007; Truscott & Hsu, 2008; Van Beuningen et al., 2012)

As Truscott (1996) pointed out, improved accuracy in revised texts does not constitute evidence of acquisition. A key question, then, is whether the benefits of asking learners to revise following WCF are passed on to new writing. This question is addressed in the section that follows.

**2.4.3.2 Effects of WCF plus Revision on Acquisition.** Most of the early studies (Ashwell, 2000; Ferris, 1997; Ferris & Roberts, 2001) did not focus on the effects of WCF being extended to subsequent writing (Ellis et al., 2008). I will now turn to consider Type two studies, which addressed this concern. Type 2 studies (Bonilla López et al., 2018; Chandler, 2003; Fathman & Whalley, 1990; Karim & Nassaji, 2018; Lalande, 1982; Liu, 2008; Polio et al., 1998; Robb et al., 1986; Semke, 1984; Shintani & Ellis, 2013; Truscott & Hsu, 2008; Van Beuningen et al., 2012) examined whether the effects of WCF, in combination with revision, improved linguistic accuracy in a new piece of writing.

A number of early studies reported that WCF and the opportunity to revise had a positive effect on linguistic accuracy in new writing. Semke's (1984) study involved four experimental groups all of which completed and received feedback on weekly journal entries. Only the group that received indirect (coded) correction was required to revise their writing. Semke reported that there were no significant accuracy gains for this group in new writing

and that revising was not viewed favourably by the students. Polio et al.'s study (1998) examined whether the learners edited sentence-level errors during revision and what effect this editing had on their acquisition as shown in new writing. The students displayed a continuum of revision behavior, from sentence-level editing to rewriting their whole essays. The group that received the WCF and revised their writing, improved in accuracy in a post-test that involved new writing. In Lalande (1982) the students completed five compositions, received either direct or indirect feedback and then revised the second, third and fourth compositions. Overall, 86% of the students in the indirect WCF group and 25% of the students in the direct group attributed their improvements in their subsequent writing to having had to revise.

Other studies, however, reported that WCF in combination with revision did not lead to improved accuracy in new writing. In Robb et al. (1986) the students first completed five assignments and received feedback before revising their writing. They were also required to hand in their revisions to the teacher in the following class. There was no significant effect for WCF + revision in improving accuracy in either the revised texts or in new writing. As noted above, Truscott and Hsu (2008) did find that WCF led to accurate revisions but the benefits did not extend to new writing. Liu (2008) also found that, though both the direct and indirect WCF groups reduced errors in their immediate revisions and the former performed better than the latter, improvements did not extend to new writing.

Other more recent studies (e.g. Bonilla López et al., 2018; Chandler, 2003; Karim & Nassaji, 2018; Shintani & Ellis, 2013; Van Beuningen et al., 2012), however, have reported positive effects for WCF plus revision on new writing. In Chandler (2003) all the students revised their texts after WCF. The effects of both direct WCF and indirect WCF on revising were successfully transferred to subsequent writing, with those for direct WCF stronger. Chandler suggested that requiring students to revise their corrected drafts, irrespective of the type feedback they received, helped them notice 'the mismatch between the students' interlanguage and the target language' (p. 293) without distracting them from their main communicative purpose.

In Bonilla López et al. (2018) the students did not have access to corrections when revising. All the experimental groups showed greater long-term accuracy improvement in new writing than the control group with the direct WCF groups producing greater accuracy

gains. , Lopez et al. suggested differences could be due to the explicitness of this feedback type. The study also showed that the learners were able to retrieve what they had practiced while revising when writing a new text. In Shintani and Ellis (2013) the students revised without access to the corrections they had received and immediately completed a new piece of writing. The experimental groups outperformed the control group in accuracy in the new writing. Karim and Nassaji (2018) examined the transfer effects of indirect/direct WCF + revision (without access to the corrections) in subsequent writing. The experimental groups performed better than the control group, but the accuracy improvements were greater for the group that received direct WCF. However, the gains were not evident in the final writing task which Karim and Nassaji suggested may have been because this task was more difficult than the preceding three writing tasks. Van Beuningen et al. (2012) reported that revision following comprehensive feedback had a positive effect on accuracy in a new piece of writing that was completed after 4 weeks and, therefore, led to the acquisition of target language features. In this study, the students had access to the corrections when revising. Hartshorn et al. (2010) investigated ‘dynamic WCF where students were required to revise repeatedly until the draft was error free on new writing. They found that the effects of WCF + revision led to subsequent longer, and more accurate, pieces of writing. Karrim and Nassaji (2019) in their comprehensive review of WCF studies also reported that WCF followed by revision led to improved accuracy in new writing.

The following is a summary of the main findings of studies that have investigated the effects of WCF + revision on acquisition:

1. Some studies (Truscott & Hsu, 2008) did not find any evidence of acquisition as a result of revising.
2. WCF plus revision benefits accuracy in new writing:
3. Both focused and comprehensive WCF in combination with revision lead to improved accuracy in new writing.
4. Giving students access to the corrections while they revise may facilitate accuracy in new writing (Van Beuningen et al., 2012) although one study (Bonilla López et al., 2018) found otherwise.



5. Direct WCF + revision results in greater accuracy gains in subsequent writing than the indirect WCF + revision (Bonilla López et al., 2018; Chandler, 2003; Karrim & Nassaji, 2018; Van Beuningen et al., 2012).

6. The effects that WCF + revision has on the accuracy of writing may depend on task difficulty (Karrim & Nassaji, 2018).

Most of these studies reviewed in this section were primarily concerned with the relative effects of different types of WCF and included revision only to direct learners' attention to the WCF. Thus, it is not possible to say whether including revision had any add-on effect to the provision of WCF. To address this question, it is necessary to examine studies that compared the effects of WCF with and without the opportunity to revise.

#### **2.4.3.3 Studies that Compared the Effects of WCF with and without Revision.**

There are only three studies (Chandler, 2003; Rahimi, 2019; Shintani et al., 2014) that examined the relative benefits of including or not including revision in the design of a WCF study. In this section, I will consider Type three studies that have compared the effects of WCF with, and without, revision to examine whether revision has an add-on effect on subsequent writing.

Chandler's study (2003) compared the effects of indirect WCF +/- revision on learners' linguistic accuracy. Two groups of students completed five assignments and received indirect (located) unfocused feedback. The experimental group revised immediately after completing each assignment and the comparison group went back to do so after completing all five assignments. The study compared the accuracy gains in the first and fifth drafts of both the groups and found a reduction in the frequency of errors in the experimental group but no such reduction in the comparison group. Chandler concluded that asking students to revise after receiving WCF will lead to greater improvement in accuracy than WCF by itself. Chandler (2003) suggested that receiving WCF with no requirement to revise is equivalent to receiving no feedback at all.

Shintani et al. (2014) also compared the effects of WCF with and without revision. There were four experimental groups, all of which received focused WCF. Two of the groups had the opportunity to revise and two did not. When revising, the learners were not allowed access to their corrected texts. A control group received no feedback, nor did it

revise. Both revision groups and non-revision groups performed better than the control group in the first new writing task but only the revision group performed well in the final new writing task. The revision group that received direct correction outperformed the non-revision group in the final task although only on one of the two grammatical structures (hypothetical conditionals). This study, then, points to an advantage for WCF + revision over WCF alone but only in the long-term and not for both grammatical structures corrected.

Rahimi (2019), which I reviewed in Section 2.3.4.4, compared the effects of semi-focused and unfocused WCF with and without revision. There were four experimental groups, with the first and second groups receiving indirect (coded), semi-focused WCF and the third and fourth groups receiving indirect unfocused WCF. The first and third groups (semi-focused and unfocused) revised their writing and the second and fourth groups (semi-focused and unfocused) did not. The revision groups were required to revise their writing following the feedback, return the scripts for a second review, and then revise for the second time. Linear mixed-effects models analysis was computed to identify the effects of WCF with and without revision on learners' writing accuracy. The study suggests that revision helped learners produce more accurate subsequent writing. The unfocused + revision and semi-focused + revision groups showed the greatest gains in overall accuracy. This study supports the findings of Shintani et al. (2014). This study however did not include a control group.

In conclusion, these three studies found that revision has an add-on effect to WCF in new writing. However, further research is needed. Chandler (2013) investigated indirect comprehensive WCF plus revision while Shintani et al. (2014) investigated direct focused WCF plus revision. Rahimi (2019) examined indirect semi-focused and unfocused WCF +/- revision. Each of these studies involved different WCF methods. One study (Rahimi, 2019) did not include a control group. There is no study that has investigated whether giving students the opportunities to revise after direct semi-focused WCF is beneficial. Nor is there a study that has compared whether the benefits of revising are greater when students are allowed to keep the corrections.

#### **2.4.4 Summary**

This review has examined three types of studies: (1) studies that examined whether and, if so, how well learners make use of WCF when revising, (2) studies that investigated

whether the requirement of revision following WCF leads to improved accuracy in subsequent writing, and (3) studies that investigated whether revision + WCF leads to greater accuracy gains than WCF alone. The results reported by Type 1 studies indicate that WCF helps learners to improve their linguistic accuracy in a revised draft. The results of Type 2 studies show that WCF + revision can lead to improved accuracy in new writing. However, it is Type 3 studies that are crucial for investigating the contribution that revision can make. Only two studies investigated whether revision has an add-on effect. There is clearly a need for more studies of this type.

Recent reviews of WCF studies did not examine revision as a variable that potentially mediates the effects of WCF. Neither Karrim and Nassaji (2018) nor Kang and Han (2018) examined revision as a moderating variable so there is a clear need for more research. The present study, therefore, intends to address this issue further. Some of the carefully designed revision studies (Van Beuningen et al., 2012; Shintani et al., 2014) indicate the greater benefits of direct WCF and Kang and Han's meta-analysis also pointed to this. In my study, I will, therefore, investigate the effect of direct WCF with and without the opportunity to revise on learners' linguistic accuracy. It is also important to consider how revision will be handled. So I intend to follow the approach used by Van Beuningen et al. (2012). That is, students will have access to their corrections when revising their writing as it will increase the chances of learning taking place.

## **2.5 Learner Responses to WCF**

Mere provision of WCF without requiring learners to attend to it (i.e. notice) is insufficient to ensure the acquisition of target L2 features (Sachs & Polio, 2007; Schmidt, 1990). Therefore, in order for more effective feedback practices to occur, teachers need to find ways to engage learners' attention to the feedback (Qi & Lapkin, 2001). Learners need to be active recipients of the feedback (Lee, 2014).

### ***2.5.2 Individual versus Collaborative Responses to Feedback***

There are two main ways of inducing learners' attention to the WCF: (1) individual responses and (2) collaborative responses. The following review, therefore, considers these two categories drawing on relevant examples of WCF studies and what they have shown about the learner engagement with WCF.

## 1. Individual responses to WCF

Teachers can require learners to attend to WCF by themselves, for example by asking learners to revise their writing. Some researchers (e.g. Bonilla López et al., 2018; Chandler, 2003; Karrim & Nassaji, 2018; Shintani et al., 2014; Van Beuningen et al., 2012) have examined different approaches to individual revision behaviour. For example, Chandler (2003) simply required students to revise following WCF and found it to be effective. He suggested that it helps learners notice the ‘gap’ in their existing knowledge. Suzuki et al., (2018) asked students to look over the corrections for five minutes and then revise with no access to corrections. Some other studies (Karrim & Nassaji, 2018; Shintani & Ellis, 2013) required students to complete their revisions without access to corrections. Finally, some studies (e.g. Hartshorn et al., 2010) asked learners to maintain error logs and revise their writing continuously following three or four feedback episodes until the writing is error free.

## 2. Collaborative responses to WCF

The second way of encouraging learners to attend to corrections is to place them in pairs or small groups and ask them to go over the corrections in their writing. Student to student collaborative practices are based on the social constructivist perspective of learning that argues that learning can occur in socially constructed contexts (Vygotsky, 1978). Research has shown that collaborative tasks have the potential to create learning opportunities for learners to discuss their linguistic choices, draw on their own linguistic knowledge, negotiate and resolve problems (*see* Kassim & Luan, 2014; Kim, 2015; Storch, 1999). SLA researchers have examined the effects of two different collaborative behaviours following feedback – (a) revising a text collaboratively and (b) peer/ group discussion. Some studies have examined how collaborative revision or editing enhances the quality of the writing (Wigglesworth & Storch, 2009) and linguistic accuracy (Swain & Lapkin, 2002). Swain and Lapkin, for example, asked learners to revise their writing based on reformulations. The results showed that collaborative revisions led to more accurate texts.

Kassim and Luan (2014) examined whether collaborative dialogue plays a significant role in enhancing the effects of WCF in terms of uptake and retention. The study included 90 learners (intermediate level) in a Malaysian University. There were two experimental groups: (1) an indirect unfocused WCF group, (2) an indirect focused WCF group and (3) a control

group. The participants first completed a 200-word text based on a graphic prompt and received WCF. They were required to go over their own writing for five minutes before they discussed it in pairs. They revised their work collaboratively. The process-product analysis (i.e. This is employed to link learner related episodes (LREs) in collaborative dialogue with the accuracy performance of the participants in the immediate/ delayed post-tests) was employed to examine feedback retention. The study demonstrated that collaborative dialogue allows learners to engage, reflect on their existing linguistic knowledge, and thereby, enhances the effects of WCF.

Storch and Wigglesworth (2010) examined the effect of collaborative learner engagement with WCF in relation to both revision and peer discussion. The study compared the effects of two feedback conditions: (1) reformulations (direct WCF) and (2) indirect coded feedback on 24 university learners in Australia. The study involved three sessions. In the first session, the learners composed a data commentary text in pairs based on a graph. In session two (after five days), they received feedback and discussed the feedback in pairs (15 minutes). The pairs then revised their original writing without access to the corrections. In the third session, each learner composed a data commentary text individually using the same prompt as in the first session. The authors analyzed the pair talk and revision sessions (processing of WCF) on the number of language related episodes (LREs). The study showed that peer interaction yields benefits during writing tasks. The findings also suggest that more extensive engagement results in greater uptake and retention.

A recent study (Kim & Emeliyanova, 2019) examined the relative effect of both collaborative and individual revision behavior following indirect unfocused WCF on 36 ESL learners in USA over a period of eight weeks. There were two groups: (1) self-correction group and (2) pair-correction group. Learners in the peer correction group were asked to find a partner and stayed with the same partner throughout the study. Both the groups completed essay writing and received indirect WCF; the study involved writing two essays. While the self-correction group processed the feedback individually and then revised, the peer correction group processed the WCF in pairs and revised the original drafts individually. The revision behavior was analysed with a focus on correctly revised, unrevised and incorrectly revised errors. The study demonstrated that the learners in both the groups improved in their accuracy at the same rate. However, the self-correction group outperformed the peer-

correction group in terms of error free T units. Kim and Emeliyanova (2019) examined the extent to which collaboration can contribute to revision behavior as a supporting strategy and found that peer correction group was no better than the self-correction group in a new piece of writing. However, the former was exposed to twice as much WCF + Revision as the latter. Authors suggest that learners' cognitive engagement with the WCF was higher when dealing with their own writing than with their partner's writing. However, the study did not include a control group.

To sum up, there are two different ways of responding to WCF, individually or collaboratively. Several studies (e.g. Bonilla López et al., 2018; Chandler, 2003; Evans et al., 2011; Hartshorn et al., 2010; Karrim & Nassaji, 2018; Shintani et al., 2014; Van Beuningen et al., 2012) reported that individual processing of WCF leads to improved writing when revising and in new writing. Some other WCF studies (Kassim & Luan, 2014; Swain & Lapkin, 2002; Wigglesworth & Storch, 2009) examined the effect of collaborative learner responses to WCF and reported enhanced effects of WCF and in revision and in new writing. One study (Kim & Emeliyanova, 2019) examined the effect of both collaborative and individual responses to WCF and found an immediate effect for both but a greater effect for the latter on new writing.

One conclusion that can be drawn from the above review of studies is that both collaborative and individual engagement with WCF may be of benefit, particularly drawing learners' attention to gaps in their existing knowledge and thereby leading to L2 learning. Kim and Emeliyanova (2019) examined the effect of collaborative and individual revision behavior and found an advantage for the latter. To the best of my knowledge, there is no study that compared the effects of individual revision and peer discussion following WCF. This led me to adapt two different ways of inducing learners' attention to feedback in my study – asking learners to revise their texts following WCF individually and in peer discussion and examining the relative efficacy of individual and collaborative ways of responding to feedback on learners' accuracy improvements in new writing.

## **2.6 Learners' Perceptions about WCF and Revision/ Peer Discussion.**

### **2.6.1 Introduction**

Several WCF studies have answered whether, why, how and when WCF should be provided on students' writing. Much less research has investigated students' perceptions about corrective feedback in L2 writing. In this section, I will first discuss why it is important to understand students' perceptions about WCF and how those perceptions can influence L2 learning. This will be followed by a review of studies that have examined learners' perceptions towards feedback procedures.

Understanding L2 learners' perceptions is of significance for both SLA researchers and L2 teachers. Many SLA studies have looked at the effect of WCF and produced inconsistent findings. One possible reason for this might be the failure to examine how students perceive such feedback and the extent to which their perceptions can have an impact on their uptake of feedback. As Ellis (2010) pointed out, learner engagement with WCF is multifaceted involving cognitive, behavioural and affective factors. Affective factors include learners' attitudes and perceptions towards WCF (Han & Hyland, 2015). In other words, even if all the learners are exposed to one type of feedback, the way they respond to it may vary (Kim and Bowles, 2019) and their responses in turn can have an impact on the way they process the feedback. For example, if learners hold negative attitudes towards feedback procedures, it can have a negative impact on their learning (Schulz, 1996). Being aware of students' perceptions towards WCF will help teachers to maximize the benefits of feedback. If there is a gap between the teachers' feedback practices and learners' perceptions about it, the feedback will not be fully beneficial (Amrhein & Nassaji, 2010; Diab, 2006, Schulz, 1996).

### **2.6.2 Studies Investigating Learners' Perceptions towards Feedback**

Several studies (Amrhein & Nassaji, 2010; Ashwell, 2000; Black & Nanni, 2016; Chen, Nassaji, & Liu, 2016; Leki, 1991; Semke, 1984; Sayyar & Zamanian, 2015) have investigated students' perceptions towards both grammatical and content feedback. Some of these studies (e.g. Ashwell, 2000; Semke, 1984) reported that students prefer feedback on content and organization rather than on grammatical errors. However, most studies (Amrhein & Nassaji, 2010; Black & Nanni, 2016; Sayyar & Zamanian, 2015) found students preferred

feedback on grammar. For example, Black and Nanni studied students' responses to form-focused (i.e. grammar, vocabulary, spelling) and content-focused (i.e. content and organization) feedback using a five-point Likert scale questionnaire at a University in Thailand. They reported that the students placed higher importance on form-focused feedback, particularly grammar and vocabulary, than content and organization. Their findings are consistent with those of Amrhein and Nassaji (2010) and Sayyar and Zamanian (2015). There is also evidence (e.g. Ashwell, 2000; Chen et al., 2016; Leki, 1991) that students seem to appreciate both form-focused and content-focused feedback.

Several studies (Amrhein & Nassaji, 2010; Black & Nanni, 2016; Cohen & Cavalcanti, 1990; Chen et al., 2016; Diab, 2006; Ferris, 1995b; Hedgcock & Lefkowitz, 1994; Leki, 1991; Schulz, 1996; 2001) examined students' perceptions about correcting linguistic errors. These studies show that both ESL and EFL learners consider such corrections help to improve their writing. For example, Diab (2001) and Leki (1991), in their survey studies, showed that both ESL and EFL learners preferred their errors corrected by the teachers. Chen et al., (2016) surveyed 64 EFL learners at a Chinese University using a Likert scale questionnaire. They found that students had a positive view about the use of WCF in general. Some of these studies (Hedgcock & Lefkowitz, 1994, 1996; Ferris, 1995b; Leki, 1991) also found that L2 learners prefer teachers to attend to their written errors in the classroom. In one study, Schulz (1996) studied the responses of 340 EFL learners and teachers in an American University. The participants responded to multiple choice questions about their attitudes towards error correction. The survey showed that 94% of students perceived error correction positively. More than half of the students in this study claimed that they felt cheated when their errors were not marked. Schulz, however, did not address students' responses to different types of WCF.

Other studies have investigated students' views about the type of WCF. Several studies (Amrhein & Nassaji, 2010; Diab, 2005; 2006; Chandler, 2003; Ferris & Roberts, 2001; Lee, 2004; Zarifi, 2017) reported that most of the students preferred direct correction. Amrhein and Nassaji (2010) investigated 33 ESL students and 31 ESL teachers in a school in Canada. The participants were required to rate different types of WCF (indirect correction with clues, indirect (located) correction, direct correction, correction with a comment, correction without a comment) on a Likert scale questionnaire. They reported that they found



direct correction and explicit correction (i.e. correction along with a comment) more effective than indirect WCF strategies. They claimed they could remember the errors they made and understand how they should be remediated when the correction was more explicit. Lee (2004) examined L2 teachers' feedback and students' perceptions towards error correction in a secondary school in Hong Kong. The study involved completing a writing task followed by WCF, questionnaires and interviews. It found that 76% of students preferred to have their teacher use direct correction and most of the students indicated they could not handle indirect (coded) feedback - especially when the correction was comprehensive. They did find that error codes facilitated error identification, though. Only 9% of students claimed that indirect correction helped them improve grammatical accuracy. The students in Leki (1991) thought that attending to indirect correction was like solving a puzzle (i.e. problem solving) but also reported that their readiness to solve such problems depended on how easily they could do so.

There are a few studies (Chen et al., 2016; Han, 2017; Zamel, 1985) that have included revision in the design of their studies but they did not examine learners' perceptions of its effectiveness. Han (2017), however, reported that learners' beliefs about revision and WCF procedures mediated their engagement with the WCF. She studied six students in a Chinese University. Data was collected through classroom observations, reflective accounts and semi-structured interviews and was coded in multiple ways. The study demonstrated that learners' beliefs about revision impacted their decisions on whether to edit and rewrite the draft, and whether to avoid complicated structures in subsequent writing. Han suggested that learners' beliefs can have both a direct and indirect impact on their engagement with WCF. Their beliefs had a direct effect by guiding their revision procedures, learning strategies, external support/ resources while having an indirect influence in shaping their expectations, perceptions and motivation. The author however acknowledged that 'learners' beliefs about WCF can become more sophisticated and balanced as students gain more experience in processing and using WCF' (p.141). That is, learners' beliefs towards WCF are likely to change when they become familiar with the use of WCF.

To sum-up, it is important to consider students' perceptions about feedback (WCF/content and revision/ peer discussion) in a study such as mine. Several studies reported that students preferred form-focused WCF to content-focused WCF and very few studies reported otherwise. A few studies reported that students appreciated both content and form-

focused feedback. Several studies reported that both EFL and ESL learners perceived WCF positively. In general, the studies showed that students preferred direct to indirect WCF methods.

Neither, Kang and Hans' meta-analysis (2018) nor recent survey reviews (Karrim & Nassaji, 2019; Van Beuningen, 2010) have considered the effect of students' perceptions about WCF. Also, no study to date has examined learners' perceptions about being asked to revise individually as opposed to discussing correction collaboratively. There is a dearth of long-term research in this respect. The current study intends to fill these gaps by examining the learners' perceptions towards both form-focused and content-focused WCF and to individual versus collaborative responses to the feedback.

## 2.7 Summary

I have provided a comprehensive overview of relevant theoretical and pedagogical perspectives in developing the rationale for the use of WCF in L2 acquisition. Following is a summary of research gaps I have identified.

The first area of concern surrounds whether feedback should be focused or unfocused. I reviewed focused and unfocused WCF studies and found both types to be effective. However, there are problems with both entirely unfocused WCF and with very focused WCF. Therefore, I opted for a middle ground approach (i.e., semi-focused WCF) which I argue is more ecologically valid. However, some studies (Hashemnezhad & Mohammadnejad, 2012; Rahimi, 2019) that have examined the effect of semi-focused WCF produced mixed results, indicating the need for further research.

Another contrast is between direct and indirect WCF. Direct/ Indirect WCF studies vary mainly due to the way they are operationalized this type of WCF, namely, whether it was focused or unfocused. Both focused and unfocused WCF studies have shown that direct WCF is more effective than indirect, a conclusion supported by related reviews and meta-analyses (e.g. Kan and Han, 2015). The intermediate learners in my instructional context are unlikely to benefit from indirect WCF which demands higher cognitive skills and proper training. This led me to select direct WCF to use in my study.

The review considered studies that examined learners' perceptions of WCF. Several studies reported the students' preference towards grammar correction (Black & Nanni, 2016; Chen, Nassaji, & Liu, 2016; Amrhein & Nassaji, 2010; Ashwell, 2000). However, there has

not been any study that explored learners' perceptions towards semi-focused WCF and the techniques of learner engagement with WCF (i.e. revision and peer discussion). The current study, therefore, intends to address this gap by examining learners' perceptions towards WCF and revision/ peer discussion.

RQ1. What perceptions about the corrective process did the participants have?

Furthermore, I identified two areas of concern that need to be addressed. First, my review of WCF studies shows that learner engagement with WCF (either individually by means of revision or collaboratively via peer discussion) may facilitate feedback uptake. I found only three studies (Chandler, 2013; Rahimi, 2019; Shintani et al., 2014) that examined the contribution revision can make to the effects of WCF. No study has to date looked into the add-on effect of asking students to revise following feedback (either direct semi-focused WCF or content feedback). Second, no study has examined whether there is any difference in the effect of feedback depending on whether students keep their previous corrections when completing a new text. This led me to answer the following research questions;

RQ 2: What effect does direct semi-focused WCF, with opportunity to revise (i.e. WCF+R), have on learners' linguistic accuracy in problem-solution texts over time?

RQ3: Was there any difference in the effect of the corrective feedback for the group that had the opportunity to revise (i.e. WCF+R) depending on whether or not they had access to their corrections when writing a new text?

RQ6: Is there any difference over time in the effects of direct semi-focused WCF, with or without opportunity to revise (i.e. WCF+R and WCF+D), on linguistic accuracy and the effects of feedback on content with opportunity to revise (i.e. CON+R)?

The fourth research question asks about what effect WCF in combination with peer discussion has on learners' linguistic accuracy. Previous studies (e.g. Kassim and Luan, 2014) have shown that peer discussion is effective in inducing learners' attention to WCF and thereby leading to more linguistically accurate writing. I therefore intend to extend the WCF research by addressing the fourth research question:

RQ 4: What effect does direct semi-focused WCF, with opportunity to discuss in pairs (i.e. WCF+D), have on learners' linguistic accuracy in problem-solution texts over time?

Another conclusion drawn from the review of WCF studies is that both individual and collaborative engagement with WCF may facilitate feedback uptake. However, none of the studies have compared the effect of these two techniques. I, therefore, consider the relative

efficacy of asking students to reflect individual or collaboratively on the corrections they receive, filling another gap in the research to date:

RQ5: Is there any difference in the effects of semi-focused WCF on linguistic accuracy in problem-solution texts over time between learners who revised their writing following WCF (i.e. WCF+R) and learners who discussed the feedback in pairs (i.e. WCF +D)?

The review also showed a clear need for long-term research involving multi-shot feedback. I will address this need by carrying out a longitudinal study involving ten sessions of WCF over a period of 14 weeks.

## Chapter 3. Methodology

### 3.1. Overview

This chapter describes the methods used in the current study. Section 3.2 presents the key methodological features used in the study. Section 3.3 gives an overview of the design and results of the pilot study and the changes made to the main study. This is followed by an account of the participants, setting, design, instruments, and the procedures used in the current study in section 3.4.5. Finally, Section 3.6 presents how the data analysis is carried out.

### 3.2 Choice of Methodological Approach

There are three key methodological features of this study: (1) it was an experimental study, (2) it was classroom-based, (3) it was longitudinal. I will discuss each of these features in turn.

#### 3.2.1 *Experimental Research*

The current study adopted an experimental design. Experimental research involves the manipulation of one or more variables (i.e. independent variables) while keeping other variables under control in order to observe or determine the effect of the independent variable (s) on other variables (i.e. dependent variables) (Gass, 2010). In the case of the current study, I examined the effect of different types of feedback on learners' accuracy of finite verbs in their written products. The experimental groups received feedback on their writing (the independent variable) while keeping the other variables constant (e.g. grammar teaching). A control group completed the same writing tasks but did not receive any feedback. In order to determine the effect of corrective feedback on the linguistic accuracy of finite verb forms, the accuracy scores of the groups that received feedback were compared to those of the control group.

I decided that experimental research was best suited to my research purpose for a number of reasons:

1. The main strength of the experimental design is that it is suited to examine cause-effect relationships involving a pre-test-treatment-post-test design (Dörnyei, 2007).
2. Experimental research involves a deductive or theory-then-research approach (Gass, 2010). There are SLA theories (e.g. skill acquisition theory, socio-cultural theories, and cognitive-interaction theories) that claim that corrective feedback plays a positive role in acquisition (DeKeyser, 2007a; 2007b; Lantolf & Thorne, 2007; Long, 1981; Mackey & Polio, 2009). The study reported in this thesis is guided by these theories to examine the effect of semi-focused WCF on the linguistic accuracy of finite verbs.
3. Experimental research requires explicit and precise research question/s. The research questions formulated in the current study are based on gaps in the research that remain unanswered from previous research, as identified in Chapter two.
4. Experimental research requires that all variables are defined explicitly. The independent variables in this study include WCF, content feedback, peer discussion and revision. The dependent variable is the learners' linguistic accuracy of finite verbs. All these variables can be explicitly defined.
5. While true experimental research involves randomization of participants, this is not possible in classroom-based studies. The current study used intact classes and therefore, was quasi-experimental. The cost is, however, outweighed by the ecological validity achieved by using real classes as I discuss below. I also guard against the threat to external validity by trying to minimize any pre-existing differences between the groups. However, I acknowledge other threats such as the possibility that students in the experimental groups may have interacted and influenced students in the control group and may have interacted with each other outside the classroom (Cook & Campbell, 1979). According to Dörnyei (2007), "properly designed and executed quasi-experimental studies yield scientifically credible results" (p. 118). Thus, the current study was designed to guard against the threats to external validity as much as circumstances allowed.

### ***3.2.2 Classroom-Based Research***

The current study was a classroom-based study. As Allwright (1983) commented, classroom-based research is 'research that concentrates on the inputs to the classroom...or the

outputs from the classroom...It simply tries to investigate what happens inside the classroom when learners and teachers come together' (p. 1983). According to Gass and Mackey (2015), classroom-based research is best-equipped to enhance understanding of how to improve L2 learners' language skills by examining how languages are best taught and learned. One of the main methodological strengths of classroom-based research is its ecological validity.

According to Loewen and Plonsky (2016, p.56), ecological validity is achieved when there is a similarity between the authentic L2 learning context and research that is carried out in that learning context. The study I conducted was ecologically valid for three reasons. First, it was conducted with the same learners that the study was designed to assist. Second, the researcher – me - was an experienced teacher working in the same classrooms where the study was carried out. Third, the students were already familiar with the main methodological aspects of the study (i.e. the writing tasks, feedback on their writing, and revising). It was possible, therefore, for the researcher to examine the effect of the pedagogical interventions (i.e. feedback, revising, and peer-discussion) with minimal disturbance to the students' normal routine. The only aspect that had a manipulative effect on the regular classroom activities was the introduction of problem-solution tasks, which the students were not familiar with but which constitute a recognized pedagogical device. All the other elements (e.g. the classroom, materials, lessons, teachers, students, the feedback, etc.) were part of the regular classroom activities, thereby enhancing the external validity of the study.

I also included a few methodological decisions that I believed would increase the ecological validity of the study:

1. The class teacher was always present in the classroom with the researcher, thereby minimizing the participants' level of anxiety and degree of unwillingness to actively engage in tasks.
2. The intervention was carried out during the normal classroom time from 8 a.m. to 10 a.m. each day.
3. The class teacher was informed about the importance of the intervention and she encouraged students to actively take part in the study.
4. The feedback procedure was not substantially different from the feedback procedure used regularly with the students. For example, unfocused WCF was the common method used in these classrooms to provide feedback. Carrying out multiple revisions

on the same draft until the writing becomes error-free was another often-used procedure.

5. As the normal writing assignments were assessed for both content and language, the content feedback on writing received by the third and fourth experimental group was a type of feedback that the students were familiar with.
6. The involvement of writing topics that the students were familiar with helped retain their motivation to write.

However, as Gass and Mackey (2016) noted, there are some disadvantages of using intact classes that threaten the internal validity of a study. The main one is the impossibility of assigning students randomly to experimental and control groups. To address this problem, I took care to select groups of equal proficiency level and to check that there were no major differences in linguistic proficiency in the groups at the outset of the study by including a pre-test.

Other disadvantages of using intact classes are student attrition and the danger that the students in the control group will lack motivation to participate in the writing tasks. I addressed the issue of mortality by carrying out the writing tasks on the days of the week when the students are most likely to attend. To motivate students in the control group to continue to complete the writing tasks I gave a grade for each piece of writing.

Other steps were taken to ensure internal validity. I consulted teachers working in the students' classrooms about the choice of writing tasks. I involved another teacher in correcting the students' written work as well as myself in order to ensure the reliability of the corrective feedback. Concerns have also been raised concerning the effect of affective factors or classroom procedures on students' attitudes as a result of receiving feedback (Liu & Brown, 2015; Guenette, 2007). Therefore, after each cycle of writing task, feedback and revision/discussion, the students were given a questionnaire to elicit their responses about task difficulty and their views about corrective feedback. The information obtained from the questionnaire was used to interpret the quantitative results of the study.

### ***3.2.3 Longitudinal Study***

The study I carried out was longitudinal to ensure the theoretical and pedagogical validity of the study (Ellis, 2010; Storch, 2010). According to the SLA theories (e.g.



DeKeyser, 2007; Gass, 2003), sustained and meaningful exposure to input and practice facilitate learning. Sheen et al. (2009) for example argued that only feedback that is sustained over a considerable period of time yields truly effective results. There has been criticism of the short-term, often one- to- two-shot feedback studies and the importance of conducting, properly designed longitudinal studies to investigate the efficacy of WCF has been emphasized (Ferris, 2004; Storch, 2010). In the case of the study reported in this thesis, the effect of semi-focused WCF was examined over a period of 14 weeks involving 10 different writing tasks. Although the study might not be considered ‘longitudinal’ in ethnographic research, it is one of the most longitudinal studies of WCF to date.

### **3.2.4 Summary**

The key characteristics of my study are it is (1) experimental, (2) classroom-based and (3) longitudinal. These research designs and methodological choices were made after considering their strengths and weaknesses. I decided to adopt an experimental design as it is best suited to examine the cause-effect relationship in a pre-test – treatment – post-test study design. Because the study is classroom-based – using the classrooms the students normally study in – it has ecological validity. The disadvantages of using intact classes (e.g. student mortality, lack of motivation, non-randomization of groups) were addressed using different strategies as much as the circumstances permitted. Further care was also taken to ensure the internal validity of the writing tasks and corrective feedback by eliciting student responses after each task writing, revision/discussion cycle and also by involving a second marking procedure. The study was longitudinal in order to enhance the pedagogical and theoretical validity of the study.

### **3.3 The Pilot Study**

The pilot study was a small-scale study of the proposed materials and procedures of the main study. It was carried out in part to help uncover any issues related to the materials and procedures so I could address them before the main study began. It was also an important means of assessing the feasibility of the proposed research design, methodology and operationalization (Grass & Susan, 2016). This section, therefore, presents a brief summary of the pilot study, the issues it raised, and the changes that were made for the main study.

### 3.3.1 A Brief Summary of the Pilot Study

The study included 151 first year students of middle-range proficiency levels in a University in Sri Lanka – the same university where the main study was to be conducted. It involved five groups. There were four experimental groups: (1) the first experimental group (*hereafter* WCF+R), received direct semi-focused corrective feedback and then revised their writing (2) the second experimental group (*hereafter* WCF-R), received direct semi-focused corrective feedback and discussed feedback in pairs with no opportunity to revise (3) the third group (*hereafter* CON+R) received comments on content and organization in their writing and then revised and (4) the fourth group (*hereafter* CON-R) received comments on content and organization and discussed these comments in pairs but with no opportunity to revise. There was also a fifth group (*hereafter* Control) that merely practised writing but neither received any kind of feedback nor an opportunity to revise or discuss their writing

The study adopted a quasi-experimental research design. The data was collected over a period of 4 weeks using various instruments which included a background questionnaire, a self-assessment form, four problem-solution writing tasks (including the practice task), training materials, a questionnaire measuring students' motivation, and an exit questionnaire. The participants received corrections on a range of local errors (word-level lexical and grammatical errors) but scoring involved only the errors in finite verb constructions. Task scoring was done by inspecting whether each obligatory occasion for the use of a finite verb showed that a correct finite verb was supplied.

Each participant responded to a background questionnaire and filled in a self-assessment form in week 1. Then, they received training in how to write a problem-solution text in the same week and wrote a practice task. Each group, then, completed three writing tasks, one each week. In week 1, the first two experimental groups (the WCF+R and WCF-R Groups) completed Task one and received WCF on this task and Task two in the following weeks (Weeks two and three) with the WCF+R group being asked to revise the first and second tasks and the WCF-R being asked to discuss feedback in pairs. Both the groups, after revision and discussion sessions, completed a new task. When completing a new task, the WCF+R group was sub-divided into two groups with one (WCF+R<sup>1</sup>) being allowed to keep the corrections of the previous task as they completed a new task and the other (WCF+R<sup>2</sup>) just completing the new task without having any access to the corrections on their previous

writing. The third and fourth experimental groups (CON+R and CON-R) received feedback on content and organization on Tasks one and 2 in the following weeks (i.e. they received feedback on Tasks 1 and 2 in weeks 2 and 3 respectively). The CON+R group revised their writing following feedback and the CON-R group discussed the feedback in pairs. There was a Control group that just completed a new task each week with no opportunity to revise or discuss in pairs. All five groups responded to a questionnaire enquiring about their motivation and attitudes towards the writing tasks (i.e. task writing, receiving feedback, revising, peer discussions) and an exit questionnaire eliciting their perceptions about the tasks, feedback and revision process.

### ***3.3.2 Results of the Pilot Study***

The results of the pilot study showed that the three groups were not similar in their initial proficiency at the onset of the study. There was a clear effect for direct semi-focused WCF on learners' use of finite verbs in writing. Further, the study found that requiring students to revise following WCF enhanced the transfer effects of WCF more than just discussing corrections in pairs. Also, giving the participants access to the corrections when writing a new text had a small add-on effect. There was no evidence that the WCF had a negative effect on students' writing fluency, but the requirement of revision inhibited writing fluency.

However, there were no accuracy gains from Task 2 to Task 3 for all three groups suggesting a task effect. The first two tasks asked students to write informal letters about personal problems with which they were familiar (i.e. a difficult mother-in law and an annoying roommate) while the third task required a formal letter to the editor of a newspaper regarding a social issue. This suggests that Task 3 involved a more difficult discourse domain which prevented any transfer effect for the WCF.

### ***3.3.3 Changes to the Main Study***

The pilot study was carried out to assess the validity of the materials, design and methods of the main study. This study, however, had a number of limitations concerning the instruments, methods and the design of the main study. It raised a few issues which necessitated a number of changes in the main study. The following are the issues raised by

the pilot study and the changes made for the main study. These changes included alterations to the selection of participants, design, procedures and instruments.

### 1. Selection of the participants

The student groups used in the pilot study differed in their initial proficiency level and, therefore, examining the exact effect of WCF was difficult as the study involved five groups of different linguistic proficiency levels. In order to avoid this problem, I decided to try to ensure that the main study involved five groups of students of more equal proficiency level (i.e. middle-range proficiency level).

### 2. Control group

The pilot study included a third group which functioned as control group and it did not receive any opportunity to revise or discuss. Nor did it receive any kind of feedback. It was noticed that the students in the control group became demotivated. I concluded that the absence of any kind of feedback might have a negative effect on their motivation as students generally value feedback on their writing (Leki, 1991; Van Beuningen, 2008). As Gass and Mackey (2016) emphasise, the research needs to find ways to compensate for differing benefits between groups. Therefore, I decided that the control group in the main study would at least be provided with a grade for each writing task and also given feedback on the final task (Task 10). Further, upon completion of all the ten tasks, they would be handed in a copy of each completed writing task with corrective feedback.

### 3. Administering Task 1

The first task was administered immediately after the practice task that preceded the training session in week 1. This may have had a negative effect on students' writing fluency as the students produced fewer obligatory occasions for the target feature in Task 1 than in the practice task. This problem could be addressed by getting students to complete the practice task in week 1 and Task 1 in the following week (week 2).

### 4. Task complexity

The results of the pilot study showed that there was a possible task effect as there was a decline in accuracy scores for all three groups in Task 3 which may have been because Task

3 was more difficult for students than the other two tasks. This was addressed by obtaining evaluations of the task difficulty of the 12 tasks in the main study so that it would be possible to systematically investigate the effect of perceived task complexity (*see* Chapter 7).

#### 5. Task domain

The results of the pilot study indicated that the transfer effects of WCF can vary depending on the discourse domain involved in the writing task. For the main study, I decided to hold the discourse domain constant in all the tasks (i.e. they all involved writing letters) but to vary the addressee of the letters so that some involved a formal and others an informal letter. I also included post-task questionnaires to enable the students to comment on how difficult they found each task and whether they were familiar with the topic of a task.

#### 6. WCF

Corrections in the pilot study involved a range of local errors (i.e. word-level lexical and grammatical errors). In the main study, however, correction involved three local errors only (i.e. errors in finite verbs, prepositions and articles) as these were the most frequent local errors made by students in their writing and I wished to limit the number of corrections made on a student script.

#### 7. Scoring

I decided to correct a range of local errors (i.e. word-level lexical and grammatical errors) in the pilot. However, when I scored the scripts, to simplify the process of correcting the students' scripts, I focused only on errors in finite verbs, which was one of the most frequently occurring types of error. In the main study, corrections were made to errors in finite verbs, prepositions and articles but scoring focused only the errors in finite verbs (*see* Section 3.6).

#### 8. Exit questionnaires

The pilot study included an exit questionnaire measuring students' motivation and perceptions towards the three writing tasks, revision and discussion behavior. This questionnaire asked whether they thought the whole process of receiving feedback and revising/discussing, was useful and helpful. I decided that such information was very useful

to understand students' perceptions and that it would be better to give the students a short questionnaire after every revision/ discussion session to examine their perception towards each writing task. But I also decided to keep a final exit questionnaire because it is useful for investigating students' overall perceptions towards the whole process.

### ***3.3.4 Summary***

The pilot study which aimed to trial the materials, procedures and design for the main study raised a number of issues that required changes. Table 1 presents the issues and the steps taken to address them.

**Table 10**

*A Brief Summary of the Issues of the Pilot Study that Required a Number of Changes for the Main Study*

Issues	Changes planned
1. The inclusion of five groups of dissimilar proficiency levels	The inclusion of five groups of similar proficiency level(middle range proficiency level)
2. The danger that the students in the control group would be demotivated due to the absence of feedback on their writing	The scripts completed by the students in the Control group received a grade and feedback on the final task. Students also received a copy of each text with corrective feedback after they completed all 10 tasks.
3. The negative impact of getting students to complete Task 1 on their writing fluency immediately after the practice task.	The students completed the practice task in week 1 and Task 1 on the following week.
4. There was a potential problem of task difficulty	This problem was addressed by getting students and teachers to evaluate the difficulty of all the tasks. An exit questionnaire after each revision/ discussion session was included to examine their perceptions.
5. The discourse domain used in tasks had an effect on accuracy gains	5. In order to investigate this further, the tasks in the main study included both formal and informal letter-writing tasks.
6. Corrections involved a range of local errors and only the errors in finite verbs were scored	6. Corrections involved three local errors (errors in finite verbs, prepositions and articles). The scoring however involved only the errors in finite verbs.

### 3.4 Main Study

#### 3.4.1 Introduction

This section presents the research questions of the main study and describes the research design, methods, instruments, procedures I used to conduct the main study and how the marking, scoring and analysis of the data were carried out to address the research questions.

**3.4.1.1 The Scope of the Research and Research Questions.** The general aim of the study is to investigate the effect of different conditions of direct semi-focused WCF on the learners' accuracy of finite verbs over 10 writing tasks. The study adopted a quasi-experimental design to answer the following research questions:

The study sought to answer eight research questions:

RQ 1: What perceptions about the corrective process did the participants have?

RQ 2: What effect does direct semi-focused WCF, with opportunity to revise (i.e. WCF+R), have on learners' linguistic accuracy in problem-solution texts over time?

RQ3: Was there any difference in the effect of the corrective feedback for the group that had the opportunity to revise (i.e. WCF+R) depending on whether or not they had access to their corrections when writing a new text?

RQ 4: What effect does direct semi-focused WCF, with opportunity to discuss in pairs (i.e. WCF+D), have on learners' linguistic accuracy in problem-solution texts over time?

RQ5: Is there any difference in the effects of semi-focused WCF on linguistic accuracy in problem-solution texts over time between learners who revised their writing following WCF (i.e. WCF+R) and learners who discussed the feedback in pairs (i.e. WCF +D)?

RQ6: Is there any difference over time in the effects of direct semi-focused WCF, with or without opportunity to revise (i.e. WCF+R and WCF+D), on linguistic accuracy and the effects of feedback on content with opportunity to revise (i.e. CON+R)?

RQ7: Does correcting students' writing have an impact on learners' writing fluency?

RQ8: What effect does task complexity have on learners' linguistic accuracy and writing fluency over time?



### **3.4.2 Participants**

A total of 262 first-year undergraduate students at the University of Sri Jayewardenepura in Sri Lanka were originally included in the main study. However, only 154 students completed all 10 writing tasks over the period because they missed classes. The participants had been learning English for 11 to 12 years and their ages ranged from 18 to 22 years. There were 138 (90%) female students and 15 (10%) male students. None of the students had had an English medium secondary education. They were majoring in a variety of subjects in the Humanities and Social Sciences where the language medium in their first year, except for their English classes, was Sinhalese.

All of the first-year students enrolled in the university were required to follow a credit bearing compulsory English course in their first year. This consisted of a placement test administered by the University the results of which were used to organize them into 20 groups. The Department of English Language Teaching used two ways of grouping the students, namely (1) streaming them according to their test scores and (2) forming mixed ability groups through random grouping. In their first semester, the students met in their streamed classes on Tuesday, Wednesday and Thursday and in their mixed ability groups on Monday and Friday each week. The students engaged in most of the English language group activities (i.e. drama, oral role-plays, and group projects) in their mixed ability groups. Most of the writing and grammar teaching was carried out in the streamed classes.

The English language placement Test was administered at the beginning of their first semester. The same test scores were used to stream students in both the first and second semesters. In the second semester of their first year, when the main study was carried out, these test scores were again used to divide the students into 20 groups of equal English language proficiency level. There were two sets of groups, one with high proficiency level and the other with a combined low and middle proficiency level. There were four groups of high proficiency students and fifteen groups of medium to low proficiency students. The groups of low and middle proficiency level were formed in a way that each group consisted of an equal number of both low and middle level proficiency students. It should also be noted that these groups were formed according to the requirements of the Department. For my study, I chose five intact groups with middle to low proficiency level based on their

placement test scores<sup>3</sup> for three reasons. First, there were only four groups of high English language proficiency level students, but the study required five groups. Second, most of the students in the groups of high proficiency levels were majoring in English language and Literature and therefore had frequent exposure to English outside the classroom. Third, in contrast to the first set, the low and middle level proficiency students were exposed to English only in their English classes making it easier to guard against the intervening variables external to the study.

Table 1 below shows the mean scores of the placement test marks of the five select groups in the main study. The five groups were designated as the WCF+R (N =30), the WCF+D (N = 31), the CON+R (N =32), the CON+D (N = 31), and the Control (N = 30). A one-way ANOVA was computed on the placement test scores of the five groups. There was no statistically significant group difference ( $F(4,257) = .357, p = .839$ ).

**Table 11**

*Descriptive of the Placement Test Marks of the Five Groups*

Group	N	Mean	SD	Median value
WCF+R	30	26.82	10.95	26.5
WCF+D	31	27.06	10.41	26
CON+R	32	27.56	10.57	27
CON+D	31	27.86	10.27	27

<sup>3</sup> According to the CEFR, low-intermediate learners are those who are able to construct simple phrases and sentences using simple connectives (e.g. *but, because, and*) and compose descriptive and/ or narrative accounts of a variety of familiar subjects and everyday aspects (e.g. people, places, living conditions, family, job and education related matters). They can communicate with reasonable accuracy but make basic mistakes and errors (e.g. errors in tenses). However, in most cases, the reader can understand the meaning of the sentences regardless of the errors. The vocabulary used is simple and adequate to communicate about familiar topics. According to CEFR common reference levels, these learners belong to either A2 or B1 categories (2008).

Control	30	28.03	10.51	28
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The placement test was administered at the beginning of the first year of their study. The students had been learning English for one semester before my study began at the beginning of the second semester. However, I also had access to the students' marks in the examination they took at the end of their first semester. To further examine whether the five groups differed in their initial proficiency level, One-way ANOVA was conducted on students' scores from the end of semester 1 examination. The results revealed that there were no statistically significant group differences ( $F(4,251) = .490, p = .743$ ).

A large majority of the participants rated their writing skills as lower or intermediate - none of them evaluated their skills as high. They rated their knowledge of grammar as weak or average with only two students rating it as good. A large number (85%) assessed their ability to construct grammatical sentences as weak or average with 16% of them evaluating it as weak. All the students acknowledged that knowledge of grammar was very important in their writing

### **3.4.3 Setting**

The study was carried out at the Department of English Language Teaching at the University of Sri Jayewardenepura, Sri Lanka. The population and the class setting for the main study was the same as for the pilot study. Classes met 10 hours per week, 2 hours from 8 a.m. to 10 a.m. every weekday. Students were required to attend 80% of classes in order to sit the final year exam, therefore, the daily attendance rate was fairly good. The purpose of the English programme was to improve students' listening, speaking, reading and writing skills and, most importantly, to help them to develop their confidence and the basic language skills that they needed to follow subjects in their second, third and fourth years of learning when English became the medium of instruction. The lessons in the programme typically included different task-based and task-supported activities. There were also discrete grammar exercises following grammar lessons, LMS based writing and listening activities, and different speaking activities. Writing was incorporated into each lesson. The students engaged in different writing activities in English (i.e. descriptive writing, diary writing,

informal letter writing) and writing practice was emphasized throughout the curriculum. Unfocused WCF was a common strategy used in these classes by the teachers.

#### **3.4.4 Design**

The study was quasi-experimental involving five different groups of students. There were four groups designated as the experimental groups. Two groups received WCF and: (1) the first group received direct unfocused corrective feedback with the opportunity to revise (hereafter *WCF+R*); (2) the second group received direct unfocused corrective feedback with opportunity for peer discussion but with no opportunity to revise (hereafter *WCF+D*). Another two groups did not receive WCF: (3) the third group received feedback only on content and organization and then revised their writing (hereafter *CON+R*); (4) the fourth group also received comments on content and organization and discussed these comments in pairs but did not revise their writing (hereafter *CON+D*). There was a control group that did not receive any kind of feedback but practiced writing weekly (hereafter *Control*). Table 12 below shows how the conditions of the five groups differed.

**Table 12***The Groups Involved in the Main Study Along With the Variables*

	Group	Task writing	WCF	comments on content and organisation	Revision	Peer Discussion
1	WCF+R	√	√		√	
2	WCF+D	√	√			√
3	CON+R	√		√	√	
4	CON+D	√		√		√
5	Control	√				

The WCF+R group was divided into two sub-groups with one section being allowed to keep the corrections of the previous draft (e.g. Task 1) as they completed the new task (e.g. Task 2) (hereafter  $WCF+R^1$ :  $n = 17$ ) and the other just completing a new task without access to the corrections of Task 1 (hereafter  $WCF+R^2$ :  $n = 13$ ). Table 4 illustrates the variables involved in sub-groups of the WCF+R group.

**Table 13***Sub-Groups of the WCF+R Group*

Sub-groups of the WCF+R	Task 1	Corrections		Task 2	
		(WCF) on Task 1	Revision	Access to corrections	No access to corrections
WCF+R <sup>1</sup>	√	√	√	√	
WCF+R <sup>2</sup>	√	√	√		√

Each group initially received training in how to write a problem-solution task. They then completed 10 writing tasks, one each week. The first and second experimental groups (the WCF+R and WCF+D groups) completed a task (e.g. Task 1) in week 1 and received WCF on their writing the following week (week 2), the WCF+R being allowed to revise their drafts using the feedback and the WCF+D being asked only to discuss the feedback in pairs. Both the groups, then, completed a new task immediately (e.g. Task 2). The third and fourth experimental groups (the CON+R and CON+D groups) completed the same writing task in week 1 (e.g. Task 1) and received comments on content and organization on their writing the following week (week 2). The CON+R group was asked to revise their writing using the feedback and the CON+D group discussed the comments in pairs. Both the groups then completed a new task (Task 2). The same pattern of writing a task, receiving feedback and revising or discussing following feedback was continued for the remaining eight tasks up to the final task (Task 10). There was a control group that completed all 10 tasks, one each week but they did not receive any feedback nor did they have any opportunity to revise or discuss in pairs.

The students in each group were given a background questionnaire at the onset of the study eliciting personal and educational information. They also completed a self-assessment form self-evaluating their English language skills. The study included a short questionnaire after each writing task, revision/discussion episode and also a final exit questionnaire asking

about students' perceptions of the whole process, namely task writing, receiving feedback, and revising or discussing. Upon completion of the ten tasks, students were interviewed to elicit their retrospective thoughts about the revision/ discussion process. Table 14 below shows the complete design of the main study.

**Table 14***Design of the Research*

	<b>Group 1 (WCF+R)</b> N=30	<b>Group 2 (WCF+D)</b> N=31	<b>Group 3 (CON+R)</b> N=32	<b>Group 4 (CON+D)</b> N=31	<b>Group 5 (Control)</b> N=30
<b>Week 1</b>	Background Questionnaire + Self-assessment Form				
	Training + Practice Task				
<b>Week 2</b>	<b>Task 1</b>				
	Questionnaire measuring task difficulty and student motivation for Task 1				
<b>Week 3</b>	WCF + Revision of Text 1	WCF+ Peer discussion of Text 1	Content comments +Revision of Text 1	Content comments + Peer discussion of Text 1	<b>Task 2</b>



	<b>Task 2</b>					
	Access to corrections on Task 1	No access to corrections on Task 1	<b>Task 2</b>	<b>Task 2</b>	<b>Task 2</b>	
Questionnaire measuring task difficulty and student's motivation for Task 2 (after Task 2)						
<b>Week 4</b>	WCF + Revision of Text 2	WCF+ Peer discussion of Text 2	Content comments +Revision of Text 2	Content comments + Peer discussion of Text 2	<b>Task 3</b>	

	<b>Task 3</b>					
	Access to corrections on Task 2	No access to corrections on Task 2	<b>Task 3</b>	<b>Task 3</b>	<b>Task 3</b>	
Questionnaire measuring task difficulty and student's motivation for Task 3 (after Task 3)						
<i>Week 5</i>	WCF + Revision of Text 3		WCF+ Peer discussion of Text 3	Content comments +Revision of Text 3	Content comments + Peer discussion of Text 3	<b>Task 4</b>
	<b>Task 4</b>		<b>Task 4</b>	<b>Task 4</b>	<b>Task 4</b>	

	Access to corrections on Task 3	No access to corrections on Task 3				
Questionnaire measuring task difficulty and student's motivation for Task 4 (after Task 4)						
<i>Week 6</i>	WCF + Revision of Text 4		WCF+ Peer discussion of Text 4	Content comments +Revision of Text 4	Content comments + Peer discussion of Text 4	<b>Task 5</b>
	<b>Task 5</b>		<b>Task 5</b>	<b>Task 5</b>	<b>Task 5</b>	
	Access to corrections	No access to corrections on				

	on Task 4	Task 4				
Questionnaire measuring task difficulty and student's motivation for Task 5 (after Task 5)						
<i>Week 7</i>	WCF + Revision of Text 5		WCF+ Peer discussion of Text 5	Content comments +Revision of Text 5	Content comments + Peer discussion of Text 5	<b>Task 6</b>
	<b>Task 6</b>					
	Access to corrections on Task 5	No access to corrections on Task 5	<b>Task 6</b>	<b>Task 6</b>	<b>Task 6</b>	

Questionnaire measuring task difficulty and student's motivation for Task 6 (after Task 6)						
<i>Week 8</i>	WCF + Revision of Text 6		WCF+ Peer discussion of Text 6	Content comments +Revision of Text 6	Content comments + Peer discussion of Text 6	<b>Task 7</b>
	<b>Task 7</b>		<b>Task 7</b>	<b>Task 7</b>	<b>Task 7</b>	
	Access to corrections on Task 6	No access to corrections on Task 6				

	Questionnaire measuring task difficulty and student's motivation for Task 7 (after Task 7)					
<i>Week 9</i>	WCF + Revision of Text 7		WCF+ Peer discussion of Text 7	Content comments +Revision of Text 7	Content comments + Peer discussion of Text 7	<b>Task 8</b>
	<b>Task 8</b>		<b>Task 8</b>	<b>Task 8</b>	<b>Task 8</b>	
	Access to corrections on Task 7	No access to corrections on Task 7				

Questionnaire measuring task difficulty and student's motivation for Task 8 (after Task 8)						
<i>Week 10</i>	WCF + Revision of Text 8		WCF+ Peer discussion of Text 8	Content comments +Revision of Text 8	Content comments + Peer discussion of Text 8	<b>Task 9</b>
	<b>Task 9</b>		<b>Task 9</b>	<b>Task 9</b>	<b>Task 9</b>	
	Access to corrections on Task 8	No access to corrections on Task 8				
Questionnaire measuring task difficulty and student's motivation for Task 9 (after Task 9)						

<i>Week 11</i>	WCF + Revision of Text 9		WCF+ Pair discussion of Text 9	Content comments +Revision of Text 9	Content comments + Peer discussion of Text 9	<b>Task 10</b>
	<b>Task 10</b>					
	Access to corrections on Task 9	No access to corrections on Task 9				
Questionnaire measuring task difficulty and student's motivation for Task 10 (after Task 10)						
<i>Week 12</i>						



	Questionnaire measuring perceptions & Exit Questionnaire
<i>Weeks 12 &amp; 13</i>	Student interviews

### 3.4.5 Instruments and Procedures

**3.4.5.1 Background Questionnaire.** The background questionnaire consisted of both open and closed questions asking for the participants' personal (i.e. age, gender, age, etc.) and educational information (i.e. years of studying English, what kind of instruction in writing they received, etc.). (see Appendix C)

For example:

1. *The medium of instruction at school*

A. *Sinhalese*   B. *English*   C. *Tamil*

2. *Do you enjoy writing?*      Yes      No

3. *How long have you been studying English?*

A. *Since primary school*   B. *After coming to the university*   C. *Since secondary school*

D. *Less than one to two years*

The participants completed the background questionnaire at the beginning of the study.

**3.4.5.2 Training Materials for Student.** These materials included lesson plans for teachers (i.e. a power point presentation; a practice task) on how to give students instruction in how writing problem-solution texts. (see Appendix E)

In week 1, the students received instruction in how to write a problem-solution task which I conducted for all 5 groups using the lesson materials prepared before the study to ensure all the students had a good understanding of how to write a problem solution task. I conducted the lesson using a power point with all five groups. The time allocated for the training session was one hour per group.

The WCF+R, WCF+D, CON+R, CON+D and the Control groups were called A,B,C,D,E respectively Each student was given a reference number and a group letter (i.e. A15, B12) to identify them. They, then received a task sheet that contained a practice task with instructions to write the reference number given to them earlier (i.e. A15).

The training procedure for the students consisted of five basic steps:

Step 1: The students read and understood the problem-solution task.

Step 2: They identified the problem and the situation and completed a table by writing in part of the text that described the situation and the problem arising out of it.

Step 3: They discussed (in groups) possible solutions to the problem and evaluated them by thinking about possible positive and negative outcomes and difficulties that may arise.

Step 4: The groups presented possible solutions and evaluations & there was a class discussion of the best solution/s.

Step 5: The students wrote a paragraph in 10 minutes paying attention to possible errors..

Here is an example:

Step 1: The students first read and understood the problem

*Kuma and Ruchini are your best friends. They are a three-year old married couple living with Kuma's parents. The young wife constantly complains that her mother-in-law is meddling in their marriage unnecessarily. She is critical of everything Ruchini does including; how they solve their problems, how she spends her time, what she wears and where she goes. The mother-in-law is also complaining that Ruchini does not help with the household chores. This situation has created a conflict between Kuma and Ruchini. Write a letter home to your parents explaining the situation and problem and the possible solutions you have thought of and ask for their advice.*

Step 2: They completed a table

Situation	<i>Kuma and Ruchini are your best friends. They are a three-year old married couple living with Kuma's parents.</i>
Problem	<i>The young wife constantly complains that her mother-in-law is meddling in their marriage unnecessarily. She is critical of everything Ruchini does including how they solve their problems, how she spends her time, what she wears and where she goes. The mother-in-law is also complaining that Ruchini does not help with the household chores.</i>

Step 3: They discussed possible solutions and evaluated them (group activity)

Solutions	Evaluations
A. Discuss problems openly	A.(i) Avoid misunderstandings (positive evaluation) (ii) May lead to unnecessary arguments (negative evaluation)
B. Help with the household chores	B.(i) Opportunity to understand each other (ii) Caring, love (positive)

Step 4: Each group then presented their solutions and evaluations. When the students came up with a negative evaluation, they were asked to think of another solution and evaluate it. A class discussion was carried out to find out the best solutions.

Step 5: Students had 10 minutes to write and then edit their writing.

**3.4.5.3 Problem-Solution Writing Tasks.** I decided to use problem-solution tasks partly because I believed they raised issues that would be interesting and familiar to the students (i.e. issues related to their family and university life) (see Appendix F). A problem-solution task also has a very clear structure (i.e. situation – problem –solution -evaluation) which does not require students to pay much attention to organization and so allows them to focus on linguistic formulation. Thus, I believed that this kind of task, which requires students to discuss familiar personal/ social problems, will not only contribute to improved task performance on subsequent writing but also provide an ideal context for corrective feedback on linguistic features.

#### 1. Selection of tasks

I originally designed a number of different problem-solution tasks addressing common issues related to marriage, university life, job, parents, finance and society. All these writing tasks involved writing a formal or informal letter. Then a questionnaire to obtain teachers' feedback on the suitability and feasibility of the tasks was sent to 15 teachers who were very familiar with the students to be included in the study. They were asked to rate each problem solution task on a Likert scale to address two questions: (1) *do you think this task is appropriate for students in your class?*; (2) *will students be able to understand and*

*write about this problem?* Thirteen responses were received from the teachers. Of the tasks which the teachers had rated as appropriate, 11 tasks were included in the study.

## 2. Evaluation of task complexity

The pilot study found that there may have been a difference in the transfer effects of WCF according to task complexity. There were three tasks and the last task (Task 3) required students to write a formal letter to the editor of a newspaper regarding a social issue. This task appeared to be more difficult for the students than Tasks 1 and 2. Task complexity was therefore identified as a possible reason for the effect of the WCF disappearing in Task 3. To address this problem, the 11 tasks (including the practice task) were sent to 10 teachers who rated each task on a scale from 1 to 10 on four statements: (1) *The topic of the task will be familiar*; (2) *Students will know the vocabulary needed to write about this topic*; (3) *This task will be easy for students*; (4) *Do you consider this task is appropriate?*. Tasks were then ordered according to the teachers' evaluations of task difficulty using the mean easiness. Table 15 shows the mean values for the easiness of the 11 tasks. Of these tasks, the practice task was the easiest task according to the teachers' ratings. The other 10 tasks were ranked from the easiest to most difficult according to the mean easiness ranking.

Tasks were then ordered so that they alternated between easy and difficult tasks (with the easier tasks used at the beginning and the more difficult tasks later). (See Table 15).

**Table 15***Alternating Easy and Difficult Tasks*

Tasks	Mean Easiness	Category
Practice Task	5.12	Easy
Task 1	5.11	Easy
Task 2	4.11	Difficult
Task 3	4.55	Easy
Task 4	3.67	Difficult
Task 5	4.44	Easy
Task 6	3.66	Difficult
Task 7	4.22	Easy
Task 8	3.22	Difficult
Task 9	4.22	Easy
Task 10	3.11	Difficult

## 3. The 10 tasks used in the study

Table 16 presents the 10 tasks according to the order they were given to the students. Five of the tasks, including the practice task, required students to write a letter related to marriage life (Tasks 2, 6, 9, 10). Five other tasks asked students for solutions to problems related to their university or hostel life (Tasks 1, 3, 4, 5, 7). Task 8 required students to write a letter to the editor of a newspaper regarding an environmental issue. Each problem-solution writing task was intended to elicit students' writing on a familiar problem. The participants in all five groups were given a writing sheet with the instructions for writing and space for them to write their response to the task.

**Table 16***The 10 Problem-Solution Tasks Used For the Main Study*

<b>Task 1</b>	<p>Imanga, an undergraduate, was offered free hostel facilities in her fourth year. But her roommate, who seems to be a nice girl, invites a third roommate without asking Imanga. There is not enough space to keep the other person's belongings in their small room. The new girl always plays loud music. The fact that the room is always noisy and messy irritates Imanga.</p> <p><i>Imagine you are Imanga. Write a letter to the warden of the hostel explaining the situation, the problem and possible solutions you have thought of and ask for her advice.</i></p>
<b>Task 2</b>	<p>Amith is married to Thilini and lives with his parents, who are old and sick. Thilini, who has a full time job along with many household chores, constantly complains about Amith's parents and asks him to send them to an old persons' home. But Amith wants to look after his aging parents until they die.</p> <p><i>Imagine you are Amith. Write a letter to your best friend explaining the situation, the problem and possible solutions you have thought of and ask for his/ her advice.</i></p>
<b>Task 3</b>	<p>You are a third year undergraduate in the Faculty of Humanities and Social Sciences. You applied for free hostel accommodation in your university but you were rejected as the university usually doesn't provide hostel facilities for all third year students. However, you find it difficult to pay for accommodation outside the university due to some financial issues at home.</p> <p><i>Write a letter to the dean of the faculty explaining your situation, problem and possible solutions which you thought of and ask for his advice.</i></p>
<b>Task 4</b>	<p>You are a fourth year student in the University and have a part-time job as an assistant banker in People's Bank. You are required to attend a few compulsory lectures during weekdays before the final examination. However, as a probationary banker, you cannot take leave on weekdays. At the same time, If you fail to attend</p>

	<p>lectures, you will not be able to sit the final examination.</p> <p><i>Write a letter to your bank manager explaining the situation, problem and possible solutions you have thought of and ask for his advice.</i></p>
<b>Task 5</b>	<p>You are in your first-year undergraduate. A group of senior students are constantly trying to rag you in the university. Their behaviour often involves abusing and humiliating you. This situation has made you feel very uncomfortable and you are not sure what to do about it.</p> <p><i>Write a letter to the dean of your Faculty explaining the situation, possible solutions which you think should be taken to solve this problem and ask for his advice.</i></p>
<b>Task 6</b>	<p>Sama and Janith got married three years ago. They have three young children. They both feel that the other is not contributing to the marriage enough. Janith thinks his hard work is not appreciated while Shyama thinks she is overburdened with taking care of the children. Their initial love has now given way to constant arguments which have an adverse effect on their children.</p> <p><i>Imagine you are Samath. Write a letter to your mother explaining the situation, the problem and the possible solutions you can think of and ask for her advice.</i></p>
<b>Task 7</b>	<p>You are a first year undergraduate and find the food in the main student canteen lacking taste and much-needed nutrients. The canteen doesn't cater to students with a variety of needs and tastes. As a result, students always complain about poor quality meals. They believe the canteen managers only concern is the profits they can make. You have decided to visit nearby cafes outside of the university to have lunch and are often late for afternoon lectures.</p> <p><i>Write a letter to the Vice Chancellor of your University explaining the current situation, problem and possible solutions you have thought of and suggest a way forward.</i></p>
<b>Task 8</b>	<p>Rajanganaya is a self-sufficient and eco-friendly village. A non-government</p>



	<p>association with the support of the government has designed a commercial project to change this beautiful village into a city by establishing factories, shopping malls, apartments, parks, etc. Environmentalists and villagers have started to protest against the proposed project.</p> <p><i>Write a letter to the Daily Mirror explaining the situation, the problem and any possible solutions which you think can be taken to solve the problem.</i></p>
<b>Task 9</b>	<p>Mali is married to Ranga and had to leave her job after the marriage. Mali now has two beautiful sons. She has recently received an offer of a teaching job and is willing to go back to work. But Ranga insists Mali to refuse the job offer. He thinks Mali will not be able to manage her responsibilities as a mother if she has to work in a fulltime job. This situation has created a conflict between Mali and Ranga.</p> <p><i>Imagine you are Mali. Write a letter to your mother. Describe the situation, the problem and any possible solutions that you think can be taken to solve the problem and ask for her advice.</i></p>
<b>Task 10</b>	<p>Nelum, who is a widow due to the untimely death of her husband, now receives her husband's army pension, which is her only income. She wants to marry again to find support for her thirteen year old daughter but she is only entitled to the pension if she stays unmarried. She fears losing her steady income.</p> <p><i>Write a letter to a close friend explaining the situation, the problem and any possible solutions you have thought of and ask for her advice.</i></p>

#### 4. Procedures for completing the tasks

All five groups completed ten writing tasks, one each week following exactly the same procedure:

Stage 1: Each participant received a writing sheet with the task instructions written on the top of the paper.

Stage 2: The participants were told to read and understand the task instructions. Following this, the researcher explained the meaning of any words that the participants may not have understood to ensure all the participants had an equal understanding of the task and its requirements.

Stage 3: They were reminded that the task requires them to adhere to the problem-solution structure and that they must complete their task within 10 minutes.

Stage 4: The participants finished writing in 10 minutes and the texts were collected by the researcher.

### 5. A short questionnaire

Upon completion of each task, the students responded to three questions on a Likert scale: (1) *are you familiar with the topic of this task?*; (2) *did you find this writing task easy?*; (3) *did you find the writing task interesting?*. (see Appendix G)

**3.4.5.4 Feedback.** Two groups (WCF+R & WCF+D) received corrective feedback and another two groups received feedback on content and organization (COM+R & COM+D).

#### 1. Corrective Feedback

The WCF+R & WCF+D groups received direct semi-focused WCF on three types of local errors (i.e. prepositions, articles and finite verbs) in the form of underlining an error and providing the correct form above the error or inserting a missing word or feature. For example, in the sentence below, the correction involved crossing out the incorrect preposition, *in* and the incorrect finite verbs, *is irritate*, *isn't care* and *throw*, and writing *on*, *irritates*, *doesn't care* and *throws* above errors respectively. The missing article *a* was written above the place where it should have been placed.

<p>It <u>is irritate</u><sup>irritates</sup> me <sup>a</sup> lot. Because she <u>isn't care</u><sup>doesn't care</sup> about it. She <u>throw</u><sup>throws</sup> her dresses <u>in</u><sup>on</sup> the floor.</p>
--

The errors corrected involved finite verbs, prepositions and articles. Most of the local errors students had committed involved these structures. Each script was corrected by the

researcher (myself) and one of the teachers from the same institution. Both the markers carried out corrections separately and the corrected scripts were compared and any differences identified and resolved before students received their corrected drafts the following week.

## 2. *Feedback on content and organization*

The students in the CON+R & CON+D groups received comments on content and organization. Examples of the kinds of comments I made on content were:

*This is a good solution; the evaluation to your solution is negative so you might want to suggest another solution*

*consider writing about more than one solution to the problem*

*your second solution has both positive and negative consequences and therefore, you might want to discuss both in your letter*

*think as a villager when addressing this communal issue.*

Comments on organization mainly dealt with the problem-solution structure (situation, problem, solution, evaluation, and conclusion), clarity, and cohesion of ideas. I underlined or circled sentences when necessary and provided marginal comments such as:

*your expression is not clear*

*the situation needs to be expressed clearly for your mother to understand it*

*you are repeating yourself*

*evaluate your solutions, great solution!*

*start with an introduction to the problem*

and general comments at the end of the learner's text:

*Think how you could elaborate your solution further,*

*This is well written, but you need to follow the problem-solution structure.*

*Think how you could connect the sentences and paragraphs using appropriate cohesive devices,.*

*You could have discussed a little more about the solution.*

Here is an example of the comments made on one student's writing.

**Table 17**

*An Example of a Student's Script With Content Comments*

Group: CON+R	Date:	Reference No:
<b>Task 1</b>		
<p>Imanga, an undergraduate, was offered free hostel facilities in her fourth year. But her roommate, who seems to be a nice girl, invites a third roommate without asking Imanga. There is not enough space to keep the other person's belongings in their small room. The new girl always plays loud music. The fact that the room is always noisy and messy irritates Imanga.</p> <p><i>Imagine you are Imanga. Write a letter to the warden of the hostel explaining the</i></p>		
Dear mom,		
<p>How are you getting on. I am ok. By the way mom, I got free hostel. It is ok.</p> <p>But mom, <u>Our roommate seems to be a nice girl but she is very messy and careless.</u></p> <p>I have to clean my room every time because she put her every thing everywhere.</p> <p>I <u>was very agree with her and some times I give instructions to her.</u> But she don't</p> <p>care at about her. I am doing my work alone.</p>		
<p><i>Copied from the task</i></p> <p><i>← You are a bit vague here</i></p> <p><i>A good attempt!! But, you have started to say something, which in the middle part of the letter, has disappeared</i></p> <p><i>Moreover, I donot find a solution, potential solutions or evaluations at the end. The end is rather sudden.</i></p> <p><i>Paragraph separation, equal focus on each element (situation-problem-solution-</i></p>		

**3.4.5.5 Revision.** The students in the WCF+R and CON+R groups were asked to revise their writing individually after they received feedback on their first draft. They were given a sheet of lined paper to write out their revised text. The WCF+R group revised their writing based on corrective feedback and the CON+R group revised their writing based on feedback on content and organisation (*see Appendix C*). The students were given 15 minutes to complete their individual revisions. The procedure for both the WCF+R and the CON+R groups was as follows:

Step 1: The tasks with corrective or content feedback were returned to the students in the WCF+R group the following week.

Step 2: The participants were given 15 minutes to study the feedback and revise their writing using the WCF.

Step 3: The revised drafts were collected by the researcher.

**3.4.5.6 Discussion.** The students in the WCF+D and CON+D groups discussed the feedback on their writing with a peer. The instructional procedures for peer discussions can be found in Appendix G. The procedure for both the WCF+D and the CON+D groups was as follows:

Step 1: One week later, the researcher handed back the students' original drafts along with corrections/ feedback comments.

Stage 2: Students were instructed to study the corrections/ feedback comments and discuss them in pairs but with no opportunity to revise their writing. They worked with different pairs when discussing their feedback.

Stage 3: The original student drafts and the revised scripts were collected by the researcher.

The revision and discussion procedures following the WCF on the first task were carried out without specifying a time limit. The participants took less than 15 minutes to revise their writing or to have peer discussions. Therefore, the time allocated for both revision and discussion was kept the same (15 minutes) in all subsequent tasks. The students were allowed to use both their L1 and the L2 when discussing in pairs.

**3.4.5.7 Student Questionnaires.** The students in the WCF+R and CON+R groups responded to a short questionnaire after each revision/ discussion session on a Likert scale. The questionnaire consisted of questions eliciting information about how successful the students thought revising or discussing had been in helping them to improve their initial writing (see Appendix H). For example:

1) *How successful was revising your writing after receiving feedback/ comments?*

A. *Extremely successful* B. *Very successful* C. *Successful* D. *Somewhat successful*

*E. Not at all successful*

2) *How successful was discussing comments/ feedback on your writing with your partner?*

*A. Extremely successful B. Very successful C. Successful D. Somewhat successful*

*E. Not at all successful*

### **3.4.5.8 Writing a New Task.**

#### 1. Experimental groups

After revising their writing the WCF+D group, the CON+R group, and the CON+D group were given 10 minutes to complete a new task in the same lesson. They did not have access to their revised script for the previous task. The WCF+R group was divided into two sub-groups. One subgroup ( $WCF+R^1$ ) was allowed to keep their corrections when writing a new task but the other subgroup ( $WCF+R^2$ ) was not.

#### 2. Control group

This group just practiced writing by completing the ten tasks. Each week, they completed a task and handed in their writing. On the following week, they received their previous writing with a grade but with no feedback and no opportunity to discuss in pairs.

**3.4.5.9 Final Exit Questionnaire.** In week 12, all of the students completed a final exit questionnaire eliciting their perceptions about the tasks, the whole process of receiving feedback and revising/ discussing in pairs. (i.e. whether they were able to understand the tasks and found them interesting, how easy they found writing about the problems, whether they understood the teacher's feedback and found it useful, and what they thought about revising or discussing in pairs). The questionnaire also contained an open ended question regarding the students' likes and dislikes about the whole process of writing a problem-solution task, receiving feedback and revising/ discussing (*see Appendix I*).

**3.4.5.10 Student Interviews.** Interviews with selected students were conducted after the groups had completed all the 10 tasks. Six participants with high accuracy scores and six with low accuracy scores were selected from the WCF+R & WCF+D groups. The six participants in the WCF+R group included participants from both the  $WCF+R^1$  (i.e. the group

that kept corrections while writing a new text) and the WCF+R<sup>2</sup> sub-groups (the group that did not keep corrections) (see Appendix J).

The pre-determined questions consisted both open and closed questions regarding how students revised their writing/ discussed the feedback in pairs (see Appendix E). For example:

- 1) *Did you try to compare the corrections provided by the teacher and your errors in order to understand why and how your errors had been corrected?*
- 2) *Did you check whether you made any other errors than the errors corrected by the teacher and, if so, did you try to correct them?*
- 3) *Did you discuss all the corrections with your partner or just some of them? If just some of them, how did you choose which ones to discuss?*

I also asked follow-up questions depending on the answers they gave to pre-determined questions. For example;

1. *Did receiving corrections make you write more or less?*
2. *Do you think you have improved your linguistic accuracy in writing prepositions, finite verbs and articles?*
3. *Did you ask for help from your teacher when you failed to clarify certain corrections with your peer?*
4. *Why did you copy some of the sentences from the text?*

Each interview lasted for 15-20 minutes. They were conducted in Sinhalese in order to make sure all the students answered each question easily and fully. I first explained the nature of the interview and then asked the pre-determined questions about receiving corrections and revising/ discussion. The answers were also prompted by showing the students examples of the writing they had produced while they were revising. The interviews were tape recorded with the permission of the interviewee.

### **3.5 Ethical Considerations**

The current project was approved by Curtin University Human Research Ethics Committee. The study, was, therefore, carried out in line with the National Statement on



Ethical Conduct in Human Research. Before the study began, all the parties involved in the study i.e. the participants, teachers and the Head of the Department of English Language Teaching of the University of Sri Jayewardenepura were informed about the study and given an information sheet with a detailed description of the purpose, method, extent, possible risks of their involvement in this project and what their participation would entail (see Appendix A). Consent was then obtained from all the parties prior to the commencement of the study using a consent form (see Appendix B).

During the data collection phase, each participant was identified by a number given by the researcher at the beginning of the study and, thereby, the confidentiality and privacy of the respondents were respected in accordance with the ethical guidelines issued by Curtin University Human Research Ethics Committee (HRE2018-0580). The scores or comments on the students' scripts did not affect their assessment marks and were used only for research purposes

To address the ethical concern regarding the Control group, which did not receive any kind of feedback, I gave a grade on each script they produced. Also, after completing all 10 tasks, they were given a copy of their scripts with corrective feedback.

**Table 18**

*Data Collection Schedule for the WCF+R, WCF+D, CON+R, CON+D Groups*

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 12/13
Information sheets	Task 1	Feedback on Task 1	Feedback on Task 2	Feedback on Task 3	Feedback on Task 4	Feedback on Task 5	Feedback on Task 6	Feedback on Task 7	Feedback on Task 8	Feedback on Task 9	Feedback on Task 10	Student interviews
Consent forms												
Training session												
Background Questionnaires		Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Task 8	Task 9	Task 10	Exit Questionnaire	
Self-assessment forms												

**Table 19**

*Data collection schedule for the Control group*

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Information sheets	Task 1	Task 2	Task 3	Task 4	Task 5	Task 6	Task 7	Task 8	Task 9	Task 10	Exit Questionnaire
Consent forms											
Training session											
Background Questionnaires											
Self-assessment forms											

### 3.6 Analysis

#### 1. Marking and scoring of the writing tasks

The corrective feedback was semi-focused. This decision was based on the results of the pilot study, which provided evidence to suggest that a semi-focused approach to correction can help students reduce errors in their writing. Initially, I planned to provide corrections in the main study on errors in finite verbs, articles and prepositions. However, because the frequency of errors in finite verbs was very high, I elected to only correct the errors in finite verbs. To the best of my knowledge, no previous study has investigated the effect of WCF on finite verbs – an aspect of grammar that traditionally receives considerable attention in form-focused instruction.

#### 2. Obligatory Occasions for the use of finite verbs

The scoring of finite verbs in students' writing involved obligatory occasion analysis (Ellis & Barkhuizen, 2005). Obligatory occasions for the use of finite verbs in each text were first identified and each obligatory occasion was examined to see whether the finite verb was grammatically accurate. In the example below, there are five obligatory occasions; the student has constructed four obligatory occasions for the use of finite (*think, should discuss, will, is work, can help*):

He ~~think~~ we should discuss ~~a~~ problem with him. It will helpful\_our life. He ~~is work~~ hard and he \_\_\_no money.

(These sentences were extracted from one of the students' text)

All the lexical errors were disregarded (unless they contained a finite verb error) and only the grammatical errors involving incorrect forms, missing forms and non-required forms were scored as a failure to supply in obligatory occasions. A score for each script was obtained using the following formula:

# accurately supplied finite verbs/ total number of obligatory occasions) x 100.

Table 20 presents each obligatory occasion for the use of finite verbs in the above example with the incorrectly supplied forms and missing forms. Table 21 shows the score for the example above.

**Table 20***Incorrectly/ Correctly Supplied and Missing Obligatory Occasions*

	Obligatory occasions	Suppliance	Corrected forms
1	He <del>think</del>	Incorrectly Supplied	He <i>thinks</i>
2	It <del>will</del> helpful _our life	Incorrectly Supplied	It <i>will be</i> helpful
3	He <del>is work</del> hard	Incorrectly Supplied	He <i>works</i> hard
4	He _ no money	Not supplied	He <i>has</i> no money
5	we <u>should discuss</u> <del>a</del> problem with him	Correctly supplied	

**Table 21***Obligatory Occasion Analysis*

Total number of Finite verbs	Accurately supplied finite verbs	Inaccurately supplied/ missing finite verbs	Accurately supplied finite verbs/ total number of obligatory occasions) x 100
5	1	4	$(1 / 5) \times 100 = 20$

The score for the example above is 20.

### 3. Inter-coder reliability

I scored all the tasks for all five groups initially. Ten percent of the scripts (154 scripts) were randomly selected from the five groups and scored a second time by one of the teachers from the same University to calculate the inter-rater agreement. This rater was unaware of the group to which each script belonged. The Pearson Product correlation of the two sets of scores was  $r = .95$ .

I also decided to examine whether the feedback on students' writing influenced the number of words produced in their writing. Therefore, an initial decision was taken to calculate the word length of each script. The second marker (another teacher from the same Department) was instructed to count the number of words while marking the scripts. Sentences copied from the original text and unnecessarily repeated words were bracketed and excluded from counting. After the students completed all the 10 tasks, I selected a few writing samples and calculated the word length to check whether the word count was accurate. There were, however, discrepancies between my word counts and the other teacher's. I therefore re-calculated the word length of all the scripts (1540 scripts). I included all the incorrectly and correctly supplied words but excluded the salutation, signature/name, unnecessarily repeated words and the sentences directly copied from the original text. For example:

## Figure 6

### *Example of a Student's Script*

Amith is married to Thilini and lives with his parents, who are old and sick. Thilini, who has a full time job along with many household chores, constantly complains about Amith's parents and asks him to send them to an old persons' home. But Amith wants to look after his aging parents until they die. *Imagine you are Amith. Write a letter to your best friend explaining the situation, the problem and possible solutions you have thought of and ask for his/ her advice*

Dear Saduni,

How are you getting on? I think you are keeping well. These days I am busy with my studies. So I ~~cant write~~ \_ you for \_ long time. I have a serious problem. My friends, (Amith is married to Thilini and lives with his parents, who are old and sick). Thilini does a full time job and ~~face~~ many difficulties. Thilini ~~do not like~~ Amith's parents. She ~~ask~~ Amith to find an old persons' home. Amith ~~disagree~~ with Thilini. Thilini and Amith ~~was angree~~ \_ each other. I think they should manage their works. They can devide their duties. Then, they will be happy together. Another thing is parents are like our eyes. We have to look after them. ~~This is~~ my solutions. What ~~are~~ you ~~think~~ about this problem? You have experiences. I think you ~~write~~ to me soon.

Yours Faithfully,

...Sada.....

Sadarenu

In the example above, the number of words the student has produced is 124. This includes the number of correctly or incorrectly supplied words (i.e. crossed out words) but excludes the words in the salutation (*Dear Saduni*), signature (*Yours faithfully, Sandarenu, Sadu*), and the sentences

copied from the original text (*Amith is married to Thilini and lives with his parents, who are old and sick*). Ten percent of the scripts were randomly selected from the sets of the first and second raters to calculate inter-rater agreement. The Pearson Product correlation of the two sets showed  $r = .91$

#### 4. Distribution of normality

The accuracy scores of each text were subjected to statistical analysis using SPSS statistics version 21. The Shapiro-Wilk test of normality was used to check the distribution of the accuracy scores in the five groups. The results of this are reported in the Results chapter (*see* Chapter 5).

## 5. Statistical analysis

The scores were subjected to inferential statistics to investigate each research question. All the statistical analyses were carried out using SPSS version 21. In addition to significance level (P –values set at .05), the effect sizes involving pairs of groups were calculated and interpreted in accordance with Cohen’s (1988) recommendation (i.e.  $d = 0.2$  was considered as a ‘small’ effect size,  $d = 0.5$  represented a ‘medium’ effect size and  $d = 0.8$  a ‘large’ effect size) as evidence for the magnitude of differences. For statistical analyses, tests such as analysis of variance (repeated measures ANOVA) were used and, if significant differences for groups’ means were found, appropriate post-hoc tests (such as t test) were computed in order to respond to each research question.

The study sought answers to seven research questions which are discussed in four results/discussion chapters. Each chapter will discuss the results of specific research question/s followed by the discussion



## **Chapter 4. Students' Perceptions towards Feedback and Revision/ Discussion Procedures**

This chapter addresses the following research question:

RQ 1: What perceptions about the corrective process did the participants have?

I decided to report the students' perceptions (RQ1) first to enable me to draw on the findings when discussing the results of the effect WCF had on learners' linguistic accuracy and writing fluency in the following chapter. In order to do this, I used information about participants' perceptions from both the Exit Questionnaires (see Appendix I) and the student interviews (see Appendix J).

### **4.1 Overview**

I will consider the students' perceptions about feedback (i.e. WCF/ content feedback), the problem-solution writing tasks, and the revision/ discussion procedures. In order to gain a more comprehensive view of students' perceptions, the analysis involved both quantitative and qualitative data. Section 4.2 analyses the quantitative data elicited from students' responses to six closing statements in the Exit questionnaire while section 4.3 presents the quantitative results for the students' written response to an open-ended question in the Exit questionnaire and their verbal responses in interviews. The quantitative and qualitative results are discussed and summarized in Section 4.4.

### **4.2 Quantitative Data Analysis**

In this section I report the results for I used the students' responses to the Likert scale items regarding the effect feedback had had on their writing and their views about revision/ pair discussion after receiving feedback. The WCF+R, WC+D, CON+R and CON+D groups responded to the following statements on a scale from 1 – 5 (i.e. 1- Strongly disagree, 2 – Disagree, 3 – Neutral, 4 – Agree, 5 – Strongly agree):

S1: I think the teacher's feedback on my writing is useful

S2: I always pay close attention to the errors the teacher has corrected

S3: I pay attention to why the teacher has corrected each error.

S4: I try to work out why the teacher has corrected each error.

S5: I feel revising/discussing errors and comments about my writing is helpful

S6: I feel the whole process of writing and revising/ discussing is helpful.

First, the descriptive statistics are reported for all four groups. As the scores are ordinal, the Kruskal-Wallis Test was chosen to check whether there were any differences in the groups' responses to each statement.

#### ***4.2.1 Results***

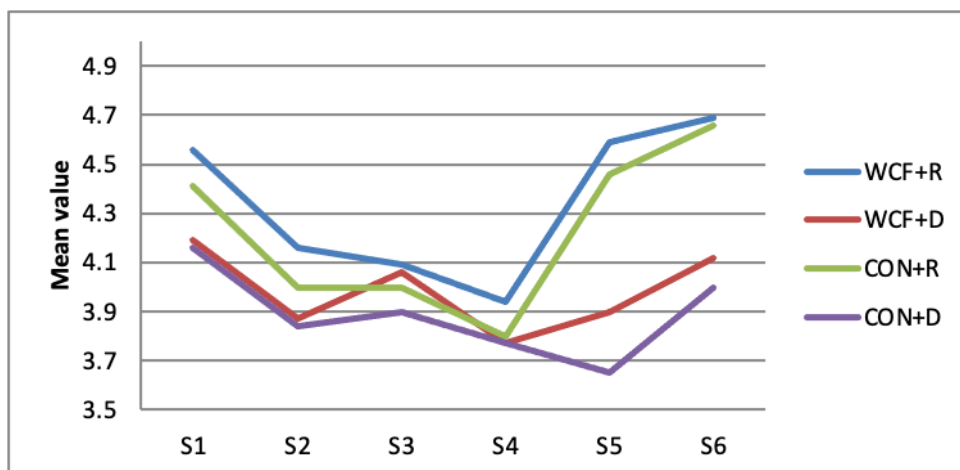
Table 22 presents the descriptive statistics for responses to the six statements by the students in the WCF+R, WCF+D, CON+R and CON+D groups. The mean scores and standard deviations for each group for each statement are displayed in Table 22. As can be seen, the responses to all the six statements were more positive in the WCF+R and CON+R groups than in the WCF+D and CON+D groups. Figure 4 graphs the means scores for the four groups.

**Table 22***Descriptive Statistics for Students' Responses*

	Statements	WCF+R		WCF+D		CON+R		CON+D	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
S1	I think the teacher's feedback on my writing is useful	4.56	0.5	4.19	0.54	4.41	0.56	4.16	0.45
S2	I always pay close attention to the errors the teacher has corrected	4.16	0.8	3.87	0.71	4	0.52	3.84	0.68
S3	I pay attention why the teacher has corrected each error.	4.09	0.68	4.06	0.89	4	4.54	3.9	0.65
S4	I try to work out why the teacher has corrected each error.	3.94	0.8	3.77	0.71	3.8	0.66	3.77	0.76
S5	I feel revising/discussing errors and comments about my writing is helpful	4.59	0.61	3.9	0.59	4.46	0.57	3.65	0.55
S6	I feel the whole process of writing and revising/ discussing is helpful.	4.69	0.47	4.12	0.49	4.66	0.47	4	0.63

**Figure 4**

*Mean Scores for Groups' Responses to Statements*



To examine whether there was any statistically significant difference between groups in the students' responses to the six statements, I conducted the Kruskal-Wallis H test using the four groups' scores for each statement. The following are the results:

**S1: *I think the teacher's feedback on my writing is useful***

The Kruskal-Wallis H test showed a statistically significant group difference ( $H(3) = 12.15, P = .007$ ). Pairwise comparisons showed that the differences were statistically significant only for the WCF+R/ CON+D ( $p = .017$ ) and the WCF+R/ WCF+D pairs ( $p = .046$ ).

**S2: *I always pay close attention to the errors the teacher has corrected***

There was no statistically significant group difference ( $H(3) = 5.84, P = .120$ ).

**S3: *I pay attention to why the teacher has corrected each error.***

The Kruskal-Wallis H test revealed that group difference did not reach statistical significance ( $H(3) = 2.19, P = .532$ ).

**S4: *I try to work out why the teacher has corrected each error***

The group difference did not reach statistical significance ( $H(3) = 1.98, P = .576$ ).

**S5: *I feel revising/discussing errors and comments about my writing is helpful***

There was an overall significant group difference ( $H(3) = 37.96, P = .000$ ). Pairwise differences were statistically significant for the WCF+R/CON+D ( $p = .000$ ), WCF+R/WCF+D ( $p = .000$ ), CON+R/CON+D ( $p = .000$ ) and CON+R/ WCF+D ( $p = .008$ ) groups. In each case the first mentioned group's score was significantly higher than the second group's score.

***S6: I feel the whole process of writing and revising/ discussing is helpful***

There was a statistically significant group difference ( $H(3) = 32.09, p = .000$ ). Pairwise group comparisons showed that the differences were significant for the WCF+R/CON+D ( $p = .000$ ), WCF+R/WCF+D ( $p = .001$ ), CON+R/CON+D ( $p = .000$ ) and CON+R/ WCF +D ( $p = .001$ ) pairs.

Group differences were not statistically significant for Statements 2, 3 and 4, all of which concern aspects related to the nature of teachers' feedback.

**4.2.3 Summary**

- The WCF+R group responded more positively to the fact that feedback was useful than the other three groups.
- The WCF+R and CON+R groups found having to revise their writing more helpful than the WCF + D and CON + D found discussing their errors..
- There were no group differences in how the groups reported attending to the teachers' feedback and working out why they made errors in writing.

**4.3 Qualitative Data Analysis**

IN this section I analyse the students' perceptions about the problem-solution writing tasks, feedback (i.e. WCF or content feedback), and revision or pair discussion procedures. I also examine if the students in the different treatment groups shared similar or different preferences about these aspects. I used the student responses to an open-ended question in the Exit questionnaire and the student interviews that were conducted after they had completed all the writing tasks. The question in the Exit Questionnaire asked students to: *Write anything else that you liked and disliked about the writing tasks and feedback you received.*

Student responses from interviews were coded as 'Interview: S3 (Interview: S x Reference number of the student), e.g. Interview: S013 and the responses from Exit

Questionnaires as 'Exit Q: S4 (Exit Q: S x Reference number of the student), e.g. Exit Q: S 034.

### 4.3.1 Data Analysis

The interviews were conducted in Sinhalese which is the students' L1 and most of the answers in the questionnaire were also in their first language. They were then scanned and 428 meaningful text blocks were generated with each text block standing for one single aspect or meaning. Four major themes were identified: [1] feedback (WCF/ Content feedback), [2] problem-solution tasks, [3] revision and [4] peer discussion of feedback. Table 24 shows level 1 coding. Figure 5 below shows the percentages of comments relating to each of the four major themes. 44% and 40% of the comments referred to *Problem-solution tasks* and *WCF* respectively. *Revision* received 14% and *Discussion* only 2%.

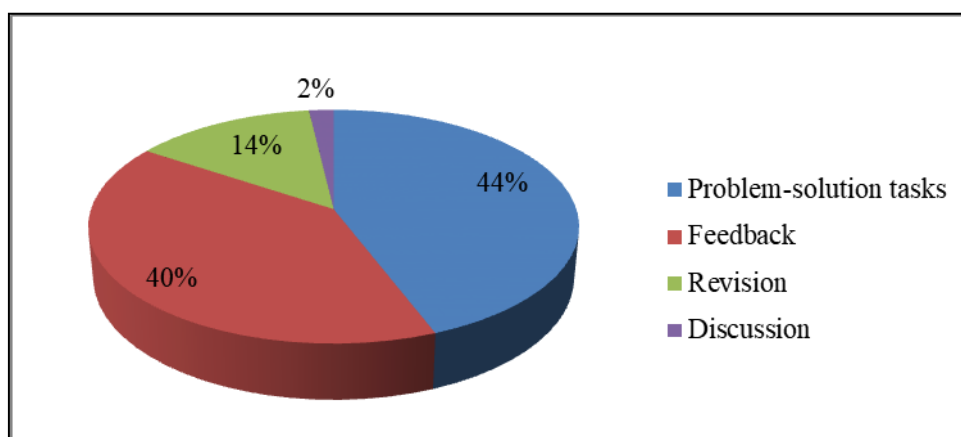
**Table 23**

#### *Level 1 Coding of Data*

Text Block	Source	Level 1
This helped us improve vocabulary [Tasks]	Exit Q	Tasks
The feedback helped improve grammar	Interview	Feedback: WCF
We didn't have enough time to complete revisions	Exit Q	Revision

**Figure 5**

*The percentage of the data each theme accounts for*



The next level of coding involved distinguishing positive and negative student

comments about each theme, as shown in Table 24. Percentages were calculated for both the positive and negative comments under each theme by dividing the number of positive comments by the number of total comments belonging to a particular theme and multiplying by 100.

**Table 24**

*Distinguishing Positive and Negative Comments*

Text Block	Source	Level 1(theme)	Type
This helped us improve vocabulary	Exit Q	Tasks	Positive
The feedback helped improve grammar	Interview	Feedback : WCF	Positive
We didn't have enough time to complete revisions	Exit Q	Revision	Negative

### 4.3.2 Results

**4.3.2.1 Theme 1: Feedback.** Students in the WCF+R and WCF+D groups received WC feedback on linguistic errors while those in the CON+R and CON+D groups received feedback on content and organization. All the students (100%) in both the WCF+R and WCF+D groups commented on the WCF positively while 95.65% of the comments by the CON+R and CON+D groups were also positive. 9.25% of the students in the CON+R, CON+D and Control groups commented negatively on the lack of linguistic feedback on their writing.

#### Positive Responses

##### 1. WCF

The students' positive comments identified a number of reasons why they liked the WCF. These are: (1) It helped them to avoid careless mistakes in writing, (2) they viewed grammar feedback as a replacement for formal writing instruction, (3) the feedback enhanced their knowledge of grammar, (4) it helped to make them more confident writers and (5) it contributed to accuracy improvements.

Here are some examples of students' comments (i.e. data from both the questionnaires and interviews) to illustrate these points:

- i. Exit Q: S79 *I found that most of the grammatical mistakes I do are careless because feedback helped me.*  
Exit Q: S11 *Feedback help us fix certain careless mistakes we do when writing essays*
  - ii. Exit Q: S150 *this is practical than teaching grammar rules*  
Exit Q: S083 *I could improve my use of verbs without having any formal grammar instructions*
  - iii. Exit Q: S169 *We got an understanding of some grammar rules we had never learned*  
  
Interview: S017 *I just kept on writing and even though I received some feedback on my writing in the class, I did not have a clear picture of what type of mistakes or errors I do in my writing. But receiving feedback on my writing continuously for 10 weeks helped me evaluate problems in my writing. Now I know some of the grammatical areas that I need to pay attention in my writing.*
  - iv. Interview: S056 *I tried to write sentences grammatically, so my confidence improved and I could construct sentences on my own. I saw improvements in my writing when we write last tasks but the programme stopped soon.*  
Exit Q: S115 *It improved the ability to construct on my own*
  - v. Exit Q: S190 *we could improve accuracy in our writing*  
Exit Q: S028 *I could improve my ability to construct sentences, clauses accurately*
2. Content feedback

Most of the students in the CON+R and CON+D groups also commented positively about content feedback giving several reasons: (1) The feedback helped to improve their writing skills, e.g. paragraph organization, essay writing, (2) It enhanced students' confidence and motivation in writing, and (3) it helped them avoid problems in writing, e.g. grammatical problems. Below are students' comments that exemplify these points:

- i. Exit Q: S363 *I had a problem with paragraph writing before this. But feedback helped me with that*  
Exit Q: S209 *It helped me improve my essay writing skills*



- ii. Exit Q: S253 *It helped me build up confidence in writing*  
Exit Q: S245 *But after this, I started to like English*
- iii. Exit Q: S338 *This helps to improve our grammar in sentence construction*  
Exit Q: S323 *and we could avoid problems we identified through feedback in our new writing*

### **Negative responses:**

A few students in the CON+R, CON+D and the Control groups, however, responded negatively about not receiving corrective feedback on their linguistic errors. In contrast, none of the students who received WCF made any negative comments about the feedback. Nor were there any negative responses about content feedback. A majority of the students in the Control group and a few students in the CON+R and CON+D groups found the lack of grammar feedback disappointing. For example,

- i. Exit Q: S438 *I saw grammar mistakes in my writing and felt disappointed*  
Exit Q: S429 *I saw mistakes in my writing, but they (grammatical mistakes) were not marked*

**4.3.2.2 Theme 2: Problem-Solution Tasks.** There were 88.29% of students who responded positively about the tasks giving various reasons; only 11.70% commented about negative aspects.

### **Positive responses**

A large majority of students expressed a positive attitude towards the problem-solution tasks giving a number of reasons: (1) The tasks dealt with issues with which the students were familiar, (2) the students found tasks motivating/ interesting, (3) the tasks helped them improve their writing skills, e.g. paragraph organization (4) the tasks contributed to improving their vocabulary and time management skills. Below are examples of students' comments that illustrate these points:

- i. Exit Q: S381 *Tasks contained problems familiar to us*  
Exit Q: S326 *we could read familiar situations that we face in or everyday life*
- ii. Exit Q: S137 *each task brought new but interesting problem*

Interview: S090 *We all appreciate it, everybody says that the programme stopped when we started to see our real improvement, those who don't like to write in English may have found this as a trouble, but we were in groups, so all of them completed task writing. There was a girl in our group who found it really difficult to write earlier, but we were happy to see that she managed writing tasks, she could write tasks well. We like them. We prefer to have this for a period of one year. We felt disappointed when you said that this was the last task. Those who liked writing, wrote it enthusiastically*

- iii. Exit Q: S016 *this is a good way to teach how to write an effective paragraph and organize facts in an essay*  
Exit Q: S068 *I could improve the quality and quantity of my writing*
- iv. Exit Q: S046 *it helped us improve time management skills when writing an essay*  
Exit Q: S 314 *I could learn new words day by day*

### **Negative responses**

There were, however, a few negative comments about the problem-solution tasks. These included: (1) The students were concerned about the time allocated to complete the tasks, (2) some students found tasks boring and not interesting, and (3) a few students found the tasks difficult:

- i. Exit Q: S305 *I didn't have enough time to finish tasks sometimes.*  
Exit Q: S193 *Time was not enough so that we couldn't write accurately.*
- ii. Exit Q: S241 *Writing about family problems and getting feedback on them bored me sometimes.*  
  
Exit Q: S319 *We had to write one task and revise another task each day and it bored me*
- iii. Exit Q: S331 *It was difficult for me to understand some of the problems and find solutions for them.*  
Exit Q: S132 *some tasks were challenging*

**4.3.2.3 Theme 3: Revision.** A large majority (88.13%) of the students in the WCF+R and CON+R groups responded to having to revise positively and only 11.59% commented about its negative aspects.

**Positive responses:**

Students gave different reasons for why they liked revising their writing after receiving feedback: (1) They found revision helped them to attend to problems in their writing, e.g. sentence level linguistic errors in writing, (2) it helped to improve their writing skills at the macro level e.g. content and organization, (3) revision helped them to reflect on what they had previously written, and (4) some students found revision motivating. The following support each of these points:

- i. Exit Q: S042 *Copying my writing made it easy for me to pay a special attention to problems in my writing.*  
Exit Q: S020 *By revising our previously written drafts, we could rectify some of our problems in writing*
- ii. Exit Q: S022 *I think rewriting the same essays correcting our errors, improved our writing skills.*  
Exit Q: S 277 *I fixed content and organization problems in my writing*
- iii. Exit Q: S046 *Revision was effective. I could rethink about what I wrote when revising. I added new sentences*  
Interview: S034 *Yes, revision was really good. We copied the correct sentences but we could learn from it. I could remember most of the copied sentences and I have used some of the sentence patterns when writing subsequent tasks. I corrected all my errors when revising. I added some new sentences to the original writing. I corrected some of the spelling mistakes.*
- iv. Interview: S 052 *Yes, we tried to compare errors with the corrections. So revising is good, we saw the error again and again when revising, then we tried not to repeat it*  
Interview: S 217 *I tried to change the content of the final drafts when revising and I tried to write more in last tasks*

### Negative responses:

Some students, however, commented negatively about revision: (1) A few students in the CON+R group found revision demotivating, and (2) some students found the time allocated for revision insufficient:

- i. Exit Q: S231 *Sometimes, I copied the same text without changing anything*  
Exit Q: S278 *I didn't like revising and writing a new task on the same day*
- ii. Exit Q: S278 *Time was not enough for revision.*  
Interview: S 350 *I couldn't complete some of my revisions well within the time given by the teacher. It would have been better if we had not got revision and new task writing on the same day. Some students did not like to write two tasks on one day.*

**4.3.2.4: Theme 4: Pair Discussion.** The students who discussed the corrections they received in pairs (i.e. those in WCF+D and CON+D groups) responded both positively and negatively about their experiences. However, it was notable that only 7.14% of the students in both groups commented on having to discuss corrections. Of these 4.4% were positive:

### Positive Responses:

Students' positive responses all pointed to one advantage - collaborative learning:

- i. Interview: S102 *I tried to compare my mistakes with my friend's, he compared his with mine ... We discussed the errors that I don't understand and the friend understands, I explained the errors he doesn't seem to understand.*  
Interview: S90 *yes, it was helpful, rather than just going through the draft, it is easy to remember when somebody tells you once or twice about the mistake*

### Negative Responses:

There were however a few negative comments about peer discussion following feedback: (1) Some students discussed only the most frequent errors, and (2) the students commented that there was not enough time to attend all the comments. The examples given below illustrate these two points:

- i. Interview: S105 *We didn't discuss all the errors, but we used this opportunity to discuss the most frequent errors*

- ii. Interview: S426 *I found it difficult to comprehend some comments with time. We didn't get time to go through the whole scripts*

#### **4.3.3 Summary**

The analysis on students' comments in the Exit questionnaire and student interviews uncovered a number of reasons why students liked or disliked the feedback (i.e. WCF or content feedback), problem-solution writing tasks, and revision and peer discussion procedure. Table 25 presents a summary of students' negative and positive comments about each of the above aspects.

**Table 25**

*Summary of the Students' Responses to Feedback, Writing Tasks, Revision and Discussion*

		Positive Responses	Negative Responses
01	WCF	<ul style="list-style-type: none"> <li>a. helps to avoid mistakes in writing</li> <li>b. feedback is preferable to formal writing instruction</li> <li>c. improves knowledge of grammar</li> <li>d. improves writing accuracy</li> <li>e. improve confidence</li> </ul>	<ul style="list-style-type: none"> <li>a. lack of grammar feedback</li> </ul>
	Content Feedback	<ul style="list-style-type: none"> <li>a. improves writing skills</li> <li>b. enhances confidence and motivation</li> <li>c. helpful to avoid problems in writing</li> </ul>	
02	Problem solution Tasks	<ul style="list-style-type: none"> <li>a. familiar</li> <li>b. motivation/interesting</li> <li>c. helps to improve writing skills</li> <li>d. improves vocabulary and time management skills</li> </ul>	<ul style="list-style-type: none"> <li>a. insufficient time allocated to writing</li> <li>b. boring/ not interesting</li> <li>c. task difficulty</li> </ul>
03	Revision	<ul style="list-style-type: none"> <li>a. helps to attend to problems in writing</li> <li>b. improves writing skills</li> <li>c. encourages reflection on previous writing</li> <li>d. motivating</li> </ul>	<ul style="list-style-type: none"> <li>a. demotivating</li> <li>b. insufficient time allocation</li> </ul>
04	Peer discussion	<ul style="list-style-type: none"> <li>a. collaborative learning</li> </ul>	<ul style="list-style-type: none"> <li>a. students only focused on the most frequent errors</li> <li>b. insufficient time to attend to all the comments.</li> </ul>

#### 4.4 Discussion

RQ1 addressed the students' perceptions about feedback (i.e. WCF/Content feedback), the problem-solution tasks and revision/ peer discussion following feedback. The results show that all the students (around 153 students) had a positive perception towards problem-solution tasks and feedback. Drawing on the quantitative and qualitative results, three main findings can be identified..

The first finding was that the WCF groups responded more favourably to the feedback than did the other groups, with the WCF+R group responding most positively. This is also supported by the results of the qualitative analysis. That is, all the students in both the WCF groups (WCF+R and WCF+D) found WCF to be beneficial while only 95.65% of the students (58 out of 60 students) in the CON+R and CON+D groups responded positively to content feedback. There were five main reasons for the students' positive perceptions towards WCF:

1. WCF helped them to avoid careless mistakes in writing
2. It was viewed as a replacement for formal writing instruction
3. Feedback enhanced their knowledge of grammar
4. It helped to make them more confident writers and
5. It contributed to improvement in linguistic accuracy.

The second finding was that the students preferred WCF to content feedback. For example, the CON+R and CON+D groups that received content feedback claimed that they preferred grammar feedback and found its absence disappointing and demotivating. This finding supports the results of previous research that has shown learners prefer their errors to be corrected by their teachers (Ferris, 1995b; Hedgcock & Lefkowitz, 1994, 1996; Leki, 1991; Mahvelati, 2012; Sato, 2017b).

Finally, the students viewed individual revision as more helpful than the opportunity to discuss in pairs. Both the revision groups (WCF+R and CON+R) found revision following feedback more effective than the groups that discussed the teacher's corrections in pairs (i.e. WCF+D and CON+D). The qualitative results revealed there were four main reasons why

they preferred revision: (1) revision helps students to attend to problems in writing, (2) it encourages reflection on previous writing, and (3) it improves their writing skills and (4) it is motivating.

#### **4.5 Conclusion**

Summing up, all the groups viewed the problem solution task and feedback positively. However, both the WCF groups were more positively disposed towards WCF than the other groups, with WCF+R group responding most positively. All the groups preferred grammar feedback to content feedback. Furthermore, the students found revision to be more advantageous than peer discussion. These findings will inform the discussion of the results in Chapters 05 and 06.



## Chapter 5. The Effect of WCF on Linguistic Accuracy

### 5.1 Overview

This chapter presents the results and discussion for RQ2, RQ3, RQ4, RQ5 and RQ6. First, it reports the effect that different WCF conditions had on learners' linguistic accuracy (i.e. their use of finite verbs). Section 5.2 gives the results of the Shapiro-Wilk test of normality for all the groups. 5.3 reports the effect that direct semi-focused WCF with opportunity to revise had on learners' linguistic accuracy in their revised texts and in new writing tasks (i.e. Research Question 1). This is followed by the results for Research Question 2 which asked about the effect of allowing students access the corrections of their previous drafts. Section 5.4 presents the results for Research Question 3 which asked about the effect WCF plus peer discussion had on learners' accuracy. Section 5.5 reports the results of Research Question 4 which asked whether the improvements in writing differed depending on whether the students were asked to revise or discuss in pairs. Section 5.6 presents the results for Research Question 5 which asked whether the accuracy improvements varied depending on whether the students revised following linguistic feedback or content feedback. In each of these sections I will first present the results of statistical analyses and then discuss the results in relation to the research question. The chapter concludes with a summary of all of the main findings (see Section 5.7).

### 5.2 Test of normality

The scores for each group were subjected to a Shapiro-Wilk test of normality. On the whole, the test results found that the accuracy scores for the WCF+R ( $p > .05$ ), the WCF+D ( $p > .05$ ), CON+R ( $p > .05$ ), WCF+R<sup>1</sup> ( $p > .05$ ), WCF+R<sup>2</sup> ( $p > .05$ ) groups met the assumption of normality required to perform parametric tests, but found the distribution for a few cases was not normal for the Control group (Task 2:  $W(29) = .73$ ,  $p = .000$  and Task 10:  $W(29) = .82$ ,  $p = .000$ ). Furthermore, while there was a significant deviation from normality in the scores for the revised texts in all the nine tasks of the WCF+R group ( $p = .000$ ), the distribution was not normal only for two tasks (Task 2:  $W(32) = .88$ ,  $p = .003$ , and Task 5:  $W(32) = .91$ ,  $p = .013$ ) in the CON+R group. I decided to use parametric tests to compare mean accuracy scores for the original and revised texts of both revision groups (i.e. WCF+R and CON+R) for three reasons. First, I ran both parametric (Repeated measures ANOVA)

and non-parametric tests (Friedman test) and found that they generated the same results and thus decided to only report the results for the parametric statistics. Second, for any given distribution, whether it is normal or not, the distribution of the mean becomes more and more normal as the size of the sample increases (see the Central Limit Theorem in Cowles, 1989). It is also claimed that if the sample size is based on 30 or more participants ( $N < 30$ ), normality can be guaranteed (Mordkoff, 2016). The sample sizes in my study were all 30 or more. Third, there are also arguments that the sample size estimation should lead to realistic determination of the required level of precision (Alreck & Settle, 1985). In my case, the study used five intact classrooms and therefore it is not possible to increase the sample size. Furthermore, as Sauro and Lewis (2012) claimed, the judgment of how precise a sample size must be can also be derived from previous studies that used the same research method. Based on the sample size in some previous classroom-based research (Suzuki et al., 2019; Bitchener et al. 2005), I argue that 30 is a valid sample size in a classroom-based study like mine. Consequently, the chapter will only report the results for parametric statistics.

### **5.3 The Effects of WCF plus Revision on Linguistic Accuracy**

This section attempts to answer the following research questions:

RQ 2: What effect does direct semi-focused WCF, with opportunity to revise (i.e. WCF+R), have on learners' linguistic accuracy in problem-solution texts over time?

RQ3: Was there any difference in the effect of the corrective feedback for the group that had the opportunity to revise (i.e. WCF+R) depending on whether or not they had access to their corrections when writing a new text?

#### **5.3.1 Results**

Research question 2 asked what effect direct semi-focused WCF plus opportunity to revise (i.e. the WCF+R group) had on learners' linguistic accuracy in revised texts and new writing. First, I examined whether the students were able to make use of the corrections they received on their first draft of each task when revising. This is followed by a comparison of the group that received WCF and revised (the WCF+R group) with the group that did not receive any feedback or revision opportunity (the Control group). The mean accuracy scores of the WCF+R and Control groups were compared using a repeated measures ANOVA (2

groups x 10 times) along with post-hoc tests (with Bonferroni adjustment). Effect sizes were also calculated.

**5.3.1.1 Effect of WCF on the Revised Texts.** Table 26 shows the scores for the original and revised texts for nine of the tasks that involved revision. The students produced more accurate revisions of their original drafts in each of the nine tasks.

**Table 26***Descriptive Statistics for Accuracy Scores in Original and Revised Drafts*

Accuracy	WCF+R (N =30)			
	Original		Revision	
	Mean	SD	Mean	SD
Task 1	61.92	18.17	91.70	26.52
Task 2	63.77	11.5	120.13	33.24
Task 3	79.78	16.16	86.83	28.35
Task 4	77.27	13.33	106.8	26.13
Task 5	79.34	12.18	113.76	29.81
Task 6	77.45	10.28	112.60	34.68
Task 7	76.31	10.85	108.16	29.81
Task 8	74.51	12.52	101.16	36.43
Task 9	82.65	11.05	130.00	34.14

A repeated measures ANOVA (2 groups x 9 times) was computed to examine whether there was any statistically significant difference between the two groups in the nine tasks. The results found significant differences for group ( $F(1,00) = 336.65, p = .000$ ), time ( $F(5,49) = 1.72, p = .000$ ) and also for time-group interaction ( $F(5,99) = 10.80, p = .000$ ). Pairwise group comparisons using a t-test showed that there was a significant difference on every task: Task 1 ( $p = .000, d = 1.31$ ), Task 2 ( $p = .000, d = 2.26$ ), Task 3 ( $p = .000, d = .30$ ), Task 4 ( $p = .000, d = 1.42$ ), Task 5 ( $p = .000, d = 1.51$ ), Task 6 ( $p = .000, d = 1.37$ ), Task 7 ( $p = .000, d = 1.41$ ), Task 8 ( $p = .000, d = 0.97$ ), and Task 9 ( $p = .000, d = 1.86$ ). In all the nine tasks, the WCF+R group produced more accurate revisions of their original drafts with large effect sizes for eight of the tasks. In other words, the students were more accurate in the revised text than in the original text in each task.

**5.3.1.2 Effects of WCF + Revision on Accuracy in New Writing.** Table 27 gives the descriptive statistics for the WCF+R and Control groups for the 10 tasks. The mean scores for both the groups in the 10 tasks are displayed visually in Figure 6. There was an initial difference in the accuracy scores between the WCF+R and Control groups in Task 1

prior to the provision of WCF. As can be seen in Figure 6, the Control group was initially more accurate than the WCF+R group. However, by Task 3 the WCF+R group had become more accurate and remained so in all subsequent tasks. While there was a gradual increase in accuracy scores from Task 1 to Task 10 in the WCF+R group, the Control group showed a decrease in accuracy over time.

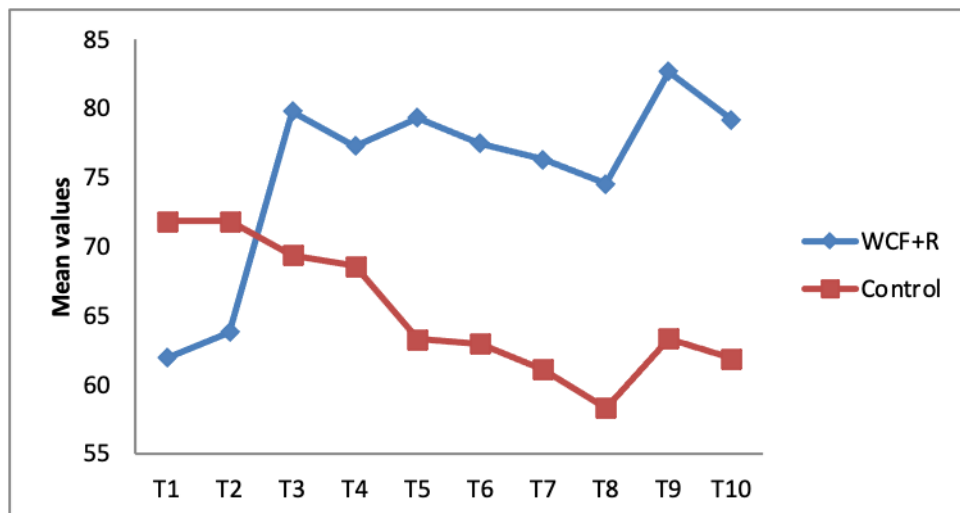
**Table 27**

*Descriptive Statistics and Effect Sizes for Accuracy of the Finite Verbs for Ten Tasks*

	WCF+R (N =30)		Control (N =30)		Effect sizes
	Mean	SD	Mean	SD	
Task 1	61.92	18.17	71.83	13.70	0.62
Task 2	63.77	11.50	71.82	18.76	0.51
Task 3	79.78	16.16	69.38	18.81	0.59
Task 4	77.27	13.33	68.60	23.68	0.45
Task 5	79.34	12.18	63.28	19.71	0.98
Task 6	77.45	10.28	62.97	17.26	1.02
Task 7	76.31	10.85	61.09	18.16	1.01
Task 8	74.51	12.52	58.32	22.43	0.89
Task 9	82.65	11.05	63.34	19.02	1.24
Task 10	79.16	7.64	61.89	17.28	1.29

**Figure 6**

*Two Groups' Mean Scores for Accuracy in Obligatory Occasions*



A repeated measures ANOVA (2 groups x 10 times) was computed to examine whether there was any statistically significant difference between two groups in the 10 tasks. The results found significant differences for group ( $F(1.000) = 10.93, p = .003$ ), time ( $F(6.217) = 2.90, p = .009$ ) and also for time-group interaction ( $F(6.246) = 9.97, p = .000$ ). Pairwise group comparisons using a t-test showed that there was a significant difference on every task: Task 1 ( $p = .020, d = .624$ ), Task 2 ( $p = .044, d = .517$ ), Task 3 ( $p = .027, d = .593$ ), Task 4 ( $p = .004, d = .451$ ), Task 5 ( $p = .002, d = .980$ ), Task 6 ( $p = .024, d = 1.023$ ), Task 7 ( $p = .000, d = 1.017$ ), Task 8 ( $p = .003, d = 0.891$ ), Task 9 ( $p = .000, d = 1.241$ ), Task 10 ( $p = .000, d = 1.292$ ). In Tasks 1 and 2, the Control group was more accurate but from Task 3 the WCF +R group was more accurate with the effect sizes large from Task 5 onwards.

### **5.3.1.3 Access to Corrections of the Previous Task When Writing a New Task.**

Research Question 2 asked about the effect of allowing students to keep their corrected drafts following WCF. To investigate this, the WCF+R group was divided into two subgroups, the WCF+R<sup>1</sup> and WCF+R<sup>2</sup>. The WCF+R<sup>1</sup> group kept their corrections when writing a new text while the WCF+R<sup>2</sup> did not. To address whether allowing students to keep corrections of the previously written task when writing a new task, I compared the accuracy scores of both the WCF+R sub-groups. First the descriptive statistics for accuracy of the finite verbs in all the 10 tasks were calculated for the WCF+R<sup>1</sup> and WCF+R<sup>2</sup> groups along with effect sizes. Then,

a repeated measures ANOVA (2 groups x 10 times) was computed to compare the mean accuracy scores of the two WCF+R sub-groups. Pairwise group comparisons using t-tests (with Bonferroni adjustment) were, then carried out to investigate whether the group differences on each task reached statistical significance.

Table 28 gives the descriptive statistics and effect sizes for the WCF+R<sup>1</sup> and WCF+R<sup>2</sup> groups from Task 1 to Task 10. The mean accuracy scores for the groups across the 10 tasks are displayed in Figure 7. As is shown in the descriptive statistics, the two WCF+R sub-groups differed in their initial accuracy scores in Task 1 before the treatment began. The WCF+R<sup>2</sup> group was more accurate in Task 1 than the WCF+R<sup>1</sup> group but by Task 2 the WCF+R<sup>1</sup> group had become more accurate in the use of finite verbs and remained so for all the subsequent tasks except for Task 5. There was a gradual increase in accuracy in both the WCF+R groups with the WCF+R<sup>1</sup> slightly more accurate than the WCF+R<sup>2</sup>. Effect sizes varied from medium to small showing a large effect size in favour of the WCF+R<sup>1</sup> only in Task 2. In Task 3, the effect size was medium in favour of the WCF+R<sup>1</sup> but in favour of the WCF+R<sup>2</sup> in Task 5.

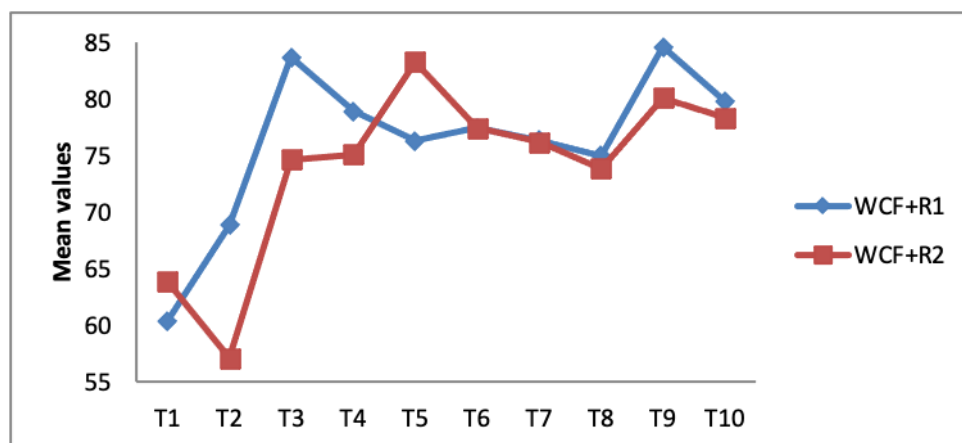
**Table 28**

*Descriptive Statistics for Accuracy of the Finite Verbs for the WCF+R Sub-Groups*

	WCF+R <sup>1</sup> (N=17)		WCF+R <sup>2</sup> (N=13)		Effect sizes
	Mean	SD	Mean	SD	
Task 1	60.42	17.36	63.88	19.71	-0.18
Task 2	68.84	8.88	57.12	11.41	1.14
Task 3	83.69	11.17	74.66	20.37	0.54
Task 4	78.91	13.31	75.13	13.58	-0.28
Task 5	76.31	11.24	83.29	12.64	-0.58
Task 6	77.46	10.32	77.44	10.65	0
Task 7	76.38	12.55	76.21	8.65	0.01
Task 8	75.01	13.78	73.85	11.17	0.09
Task 9	84.60	10.57	80.11	11.57	0.35
Task 10	79.80	7.58	78.32	7.92	0.19

**Figure 7**

*Groups' Mean Scores for Accuracy in Obligatory Occasions*



A repeated measures ANOVA (2 groups x 10 times) involving all 10 tasks was conducted to compare the groups. The results found significant differences only for time ( $F(1,000) = 11.56, p = .000$ ), but not for group ( $F(1,000) = 2.05, p = .177$ ) nor for time-group interaction ( $F(5,113) = 1.452, p = .218$ ). The effect sizes shown in Table 3 indicate a smaller



advantage for the WCF+R<sup>1</sup> than the WCF+R<sup>2</sup>. The effect sizes in 7 out of 10 tasks show that accuracy was greater in the WCF+R<sup>1</sup> than in the WCF+R<sup>2</sup> sub-group. However, in most cases these effect sizes were negligible with a large effect size only found in Task 2. Overall, the results point to little difference in linguistic accuracy between the sub-groups of WCF+R.

**5.3.1.4 Summary of Results.** Table 29 summarises the main results regarding the effect of different WCF conditions on linguistic accuracy in both the revised texts and new texts.

**Table 29***Summary of Results*

Comparisons	Accuracy in revised drafts	Accuracy in new writing
1. Original and revised drafts of the WCF+R group	There was a statistically significant difference (WCF led to improved revisions)	
2. WCF+R vs Control		<p>1. There was a statistically significant group difference</p> <p>2. The WCF+R Group improved steadily over time, while the Control Group's scores declined a little.</p>
3. WCF+R <sup>1</sup> vs WCF+R <sup>2</sup>		<p>1. There was no statistically significant group difference</p> <p>2. Both the WCF+R<sup>1</sup> and WCF+R<sup>2</sup> groups showed a gradual increase in accuracy over time</p>

**5.3.2 Discussion**

Research Question 2 asked what effect WCF plus opportunity to revise (i.e. the WCF+R group) had on intermediate level ESL learners' linguistic accuracy over time. I decided to examine this for a number of theoretical and pedagogical reasons. From a theoretical standpoint, asking learners to revise after receiving feedback serves as a technique to 'prompt' learners' attention to their errors and activate their 'engagement' with the feedback (Ellis, 2010). In other words, it affords opportunities for learners to 'notice the gap' between their interlanguage hypotheses and the target language input (Schmidt & Frota,

1986) by pushing them to make a cognitive comparison (Ellis, 1994) which, as a result, can lead to L2 learning. From a pedagogical standpoint, asking learners to revise serves as a well-established instructional strategy designed to lead students to produce better drafts and to improve writing skills. It is a key stage in the process writing approach.

Previous studies that involved the requirement of revision either examined the effect of indirect unfocused feedback (e.g. Chandler, 2003; Fathman & Whalley, 1990; Ferris, 2006, Truscott & Hsu, 2008), direct unfocused feedback (e.g. Lopez et al., 2008; Van Beuningen et al., 2012) or direct focused (e.g. Chandler, 2003; Shintani & Ellis, 2013; Van Beuningen et al., 2012). These studies reported that revision, following either focused or unfocused WCF, helped to improve learners' linguistic accuracy in new writing. However, my study was the first to examine the effect of semi-focused WCF accompanied by the opportunity to revise.

Truscott (1996) made the important point that to demonstrate the effectiveness of WCF it is necessary to go beyond showing that it can help learners to produce better second drafts of their texts examining whether it leads to linguistically more accurate new writing. It was for this reason that in my study I not only investigated whether students were able to use the corrections when revising their texts, but also whether WCF followed by revision led to improved accuracy in new writing tasks.

To answer Research Question 2, the effects of WCF on students' subsequent revisions were examined by comparing the accuracy scores of the original drafts and their subsequent revisions. The results demonstrated that there was a significant improvement in accuracy from the original draft to the revised draft. This indicates that the students were able to successfully utilize the feedback they received on their original writing as they completed their revisions. One possible explanation for this finding is that the WCF was of the direct type so the students had to simply copy the corrections in the original drafts when revising. However, interestingly, the students produced longer texts in their revised drafts suggesting that they were not just correcting their texts but also trying to improve them. Some WCF researchers (e.g. Karrim & Nassaji, 2018) did not allow students access to corrections in their original drafts in order to avoid mere copying of them when revising. The present study, however, suggested that students do more than just copy when they revise.

Second, the present study examined whether WCF + revision led to increased accuracy in new writing. To examine this, the accuracy scores of the WCF+R and Control groups were compared. The results demonstrated that students that received direct semi-

focused WCF + revision (i.e. WCF+R) produced more linguistically accurate new writing than the group that did not receive any feedback or opportunity to revise (i.e. the Control group). In Tasks 1 and 2, the Control group was more accurate but from Task 3 onwards the WCF +R group was more accurate than the Control group and the effect sizes were large from Task 5 onwards. In contrast, the Control group failed to improve from Task 2 onwards.

Thus, a key finding of the present study is that semi-focused WCF plus revision can lead to more linguistically accurate new writing. This finding extends previous research which demonstrated that revision following direct WCF was successful in reducing errors in subsequent writing (e.g. Karrim & Nassaji, 2018; Shintani & Ellis, 2013; Van Beuningen et al., 2012). These studies involved either comprehensive or focused WCF. In contrast my study took a half-way stance by opting for semi-focused WCF on the grounds that this was more ecologically valid than focused WCF but less likely to overwhelm learners (and teachers) with corrections than comprehensive WCF.

Unlike most other studies, my study investigated the effect of WCF +R over time in ten writing tasks. Some long-term studies (Evans et al., 2010; 2011; Hartshorn et al., 2010) adopted a method called 'dynamic feedback' reporting that multi-shot feedback plus revision was effective. However, whereas the treatment groups in these studies revised continuously following feedback until they had eliminated all errors, the students in my study revised their writing only once before completing a new writing task. Arguably the approach to WCF I adopted has greater ecological validity for a teaching context such as mine where continuous revision of the same text would demotivate students and there is a need to give the students the opportunity to write different tasks.

An important issue in longitudinal WCF studies is whether feedback has a consistent effect or whether it is variable. In other words, is there a steady, more or less linear growth in accuracy over time or are there peaks and troughs in the level of accuracy? The current study found that there was a steady growth in accuracy over time but with two notable peaks and some minor troughs. Thus, there were jumps in accuracy from T2 to T3 and from T8 to T9 but a relatively steady pattern of accuracy from T3 to T8. In contrast the WCF+R group and the Control group showed a steady decline in accuracy from T1 to T8. Figure 6 suggests that the effect of WCF +R was uneven. It did not always result in increased accuracy in the immediate next task but could have a sudden impact on accuracy which was then maintained

until the next major jump. Overall, however, accuracy increased by nearly 20% from T1 to T10. Interestingly, Figure 6 shows that without WCF+R, students' accuracy decreased steadily from T1 to T8 before rising and then falling in the last two tasks.

Other studies that have investigated WCF over an extended period of time have also found a non-linear pattern of accuracy improvement. For example, dynamic WCF studies found that the effect of WCF was non-linear (Evans et al., 2011; Hartshorn et al., 2010). Bitchener et al.'s (2005) 12-week study demonstrated that the overall improvement in accuracy over four writing tasks was highly variable. In contrast, with the exception of the two sudden jumps in accuracy, the level of accuracy remained steady in the current study. One possible reason for this is that all the tasks were of the same type (i.e. problem-solution tasks) posing similar demands on the students, who became familiar with what was required of them. For example, the learners were able to repeat some of the sentence structures they had used in previous tasks in subsequent tasks. Linguistic errors that appeared in letter openings and conclusions in early tasks, disappeared in subsequent tasks. The examples below illustrate how errors that were frequent when writing formal letters in the early tasks did not appear in later tasks:

Example 1:

S52: I will hope you help to me (Task 1)

S52: I hope you will help me (Task 7)

S52: I hope you will help me. (Task 10)

The student (S52) in the first example concluded his letter asking for his/her hostel warden's help (Task 1) by writing 'I will hope you help me'. This was corrected to 'I hope you will help me' and the student used the correct form in Tasks 7 and 10.

Example 2:

S1: Mother, are you remember Thilini? I married to her now (Task 2)

S1: Does mother remember Sama? Sama is married to Janith (Task 6)

In the second example, ‘are you remember Thilini?’ and ‘I married to her’ in Task 2 were corrected as ‘do you remember’ and ‘I am married to Janith’ leading to their correct use in Task 6 - ‘ does mother remember’ and ‘Sama is married to Janith’.

The purpose of the third research question was to determine whether there was any difference in accuracy gains between those students who kept their corrected drafts (the WCF+R<sup>1</sup> group) and those who did not keep them (the WCF+R<sup>2</sup> group) when completing a new text. This question was answered by comparing the accuracy scores of the WCF+R<sup>1</sup> and WCF+R<sup>2</sup> sub-groups across the 10 problem-solution tasks. The results indicated that both the sub-groups improved in accuracy over time. The effect sizes varied from small to medium in favour of the WCF+R<sup>1</sup> and in most of the tasks they were trivial but showed a large effect only in Task 2 immediately after WCF began.

There seems to be no advantage in allowing students to keep the corrections of their previously written drafts when writing a new text. The large effect size in Task 2 indicates that students initially benefited from keeping the corrections of their previous writing (i.e. Task 1) but this effect diminished from Task 3 onwards. One reason might be the fact that they received feedback, along with the opportunity to revise, on every subsequent task and keeping corrections on the previous task added little to the accumulative effect of the corrections and revisions. A further reason might be that after two tasks the students became familiar with the type of writing task (problem-solution). It is worth noting, however, that if the study had involved only two tasks and one shot of feedback (as in Tasks 1 and 2), the results would have shown that allowing students to keep their corrections had a positive effect on linguistic accuracy.

Summing up, the current study has shown that WCF helps students to produce more linguistically accurate writing when revising and also when writing new texts. This extends the findings of previous studies that involved focused or comprehensive WCF by showing the effectiveness of semi-focused WCF, which I have argued has greater ecological validity than focused WCF, at least in my teaching context. The study also shows that although WCF does not lead to entirely linear linguistic development it does have a cumulative effect. No long-term advantage was found in allowing students access to their previously corrected drafts when completing a new text. Also, it is not possible to say whether giving students the

opportunity to revise increased the effect of WCF as there was no group that received WCF without opportunity to revise. Investigating this awaits future research

#### **5.4 The Effect of WCF followed by Pair Discussion on Linguistic Accuracy in New Writing.**

This section focuses on the fourth research question;

RQ 4: What effect does direct semi-focused WCF, with opportunity to discuss in pairs (i.e. WCF+D), have on learners' linguistic accuracy in problem-solution texts over time?

##### **5.4.1 Results**

Research Question 4 asked whether WCF plus peer discussion (as in the WCF+D group) led to greater linguistic accuracy in new writing tasks. To examine this, I compared the accuracy score for the group that received WCF and then discussed corrections in pairs with the Control group. First, descriptive statistics for accuracy of the finite verbs in all of the 10 tasks was reported for the WCF+D and Control groups. Then, a repeated measures ANOVA (2 groups x 10 times) was computed to compare the mean accuracy scores of the WCF+D and Control groups. Effect sizes were also computed. Pairwise group comparisons using t-tests (with Bonferroni adjustment) were carried out to investigate whether the group differences on each task reached statistical significance.

Descriptive statistics for the WCF+D and Control groups for Task 1 to Task 10 are presented in Table 30. Figure 8 plots the changes in mean scores for both the groups across the 10 tasks. The descriptive statistics show an initial difference in mean accuracy scores between the WCF+R group and the Control group in Task 1 before WCF began. The Control group was linguistically more accurate than the WCF+D group in Task 1 but in Task 2 both the groups had similar accuracy scores. The WCF+D group improved in accuracy from Task 3 onwards while the Control group declined in accuracy scores. As Figure 8 shows, there were large effect sizes in Tasks 9 and 10.

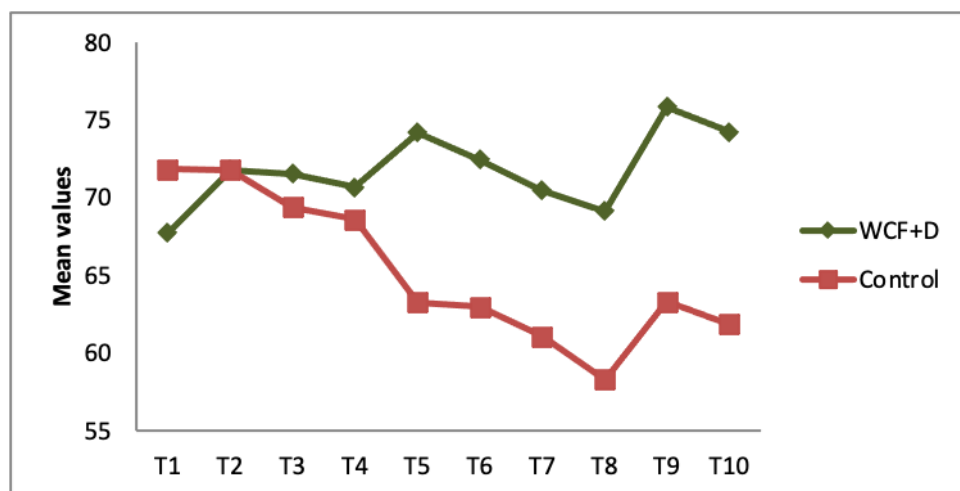
**Table 30**

*Descriptive Statistics and Effect Sizes for Accuracy of the Finite Verbs for the WCF+D and Control Groups*

	WCF+D (N=31)		Control (N=30)		Effect sizes
	Mean	SD	Mean	SD	
Task 1	67.75	13.25	71.83	13.70	0.30
Task 2	71.81	11.10	71.82	18.76	0
Task 3	71.56	15.05	69.38	18.81	0.12
Task 4	70.69	18.58	68.60	23.68	0.09
Task 5	74.18	12.23	63.28	19.71	0.66
Task 6	72.48	13.82	62.97	17.26	0.6
Task 7	70.47	15.65	61.09	18.16	0.55
Task 8	69.17	15.22	58.32	22.43	0.56
Task 9	75.87	11.36	63.34	19.02	0.79
Task 10	74.22	11.17	61.89	17.28	0.84

**Figure 8**

*Two Groups' Mean Accuracy Scores for the WCF+D and Control Groups*



To examine whether there was a statistically significant difference between the two groups, a repeated measures ANOVA (2 groups x 10 times) was computed. There was a statistically significant difference for group ( $F(1,000) = 5.46, p = .027$ ), time ( $F(6,287)$



=2.354,  $p = .030$ ) and also for time-group interaction ( $F(6.047) = 2.67$ ,  $p = .016$ ). Pairwise group comparisons using t-tests showed that the differences were all significant from Task 5 to Task 10: Task 5 ( $p=.011$ ,  $d=.664$ ), Task 6 ( $p=.018$ ,  $d=.608$ ), Task 7 ( $p=.037$ ,  $d=.555$ ), Task 8 ( $p=.055$ ,  $d=0.566$ ), Task 9 ( $p=.001$ ,  $d=.799$ ), Task 10 ( $p=.002$ ,  $d=.847$ ) but not from Task 1 to Task 4: Task 1 ( $p=.274$ ,  $d=.302$ ), Task 2 ( $p=.881$ ,  $d=.000$ ), Task 3 ( $p=.612$ ,  $d=.127$ ), Task 4 ( $p=.705$ ,  $d=.098$ ). In other words, the WCF+D group was more accurate than the Control group from Task 5 onwards.

**5.4.1.1 Summary.** The group comparison of the WCF+D and the Control groups' accuracy scores across all 10 tasks reached statistical significance. The group differences were not significant for the initial tasks but were significant from Task 5 onwards. The WCF+D group improved steadily while the Control group's accuracy level declined over time.

#### 5.4.2 Discussion

Research Question 4 asked whether direct semi-focused WCF, with opportunity to discuss in pairs but with no opportunity to revise (i.e. the WCF+D group), was effective in improving the learners' linguistic accuracy. To answer Research Question 3, the accuracy scores of the WCF+D and Control groups were compared across the ten writing tasks. The results demonstrated that the group that received direct semi-focused WCF plus peer discussion treatment was more accurate in new pieces of writing than the group that did not receive any feedback (i.e. Control group). The Control group was more linguistically accurate than the WCF+D group in Task 1 before WCF began but declined in accuracy scores from Task 3 onwards. In contrast, the WCF+D group showed a gradual accuracy improvement from Task 3 onwards with effect sizes large in the last two tasks (Tasks 9 & 10).

I also investigated whether the effects of WCF plus peer discussion were consistent over time. My study showed that there was a gradual growth in accuracy (*see* Figure 8). There were, however, sudden jumps in accuracy from T1 to T2, from T4 to T5 and also from T8 to T9. In comparison, the Control group showed a gradual decrease in accuracy from Task 2 onwards. Figure 8 suggests that the WCF+D group's accuracy gains were not linear. In particular, it shows that there was a gradual increase in accuracy from T1 to T4, a slight decline in the next four tasks (Tasks 5, 6, 7, 8) and a sudden leap from T8 to T9, reaching a

peak in T9. Overall, the accuracy trends in Figure 8 (see Section 5.3.1) indicate that WCF, combined with peer discussion, led to gradual but uneven accuracy gains in comparison to the Control Group,

There is a general consensus among SLA researchers that feedback needs to be noticed and acted on by learners to benefit L2 learning (Bitchener, 2012; Lee, 2013; Wigglesworth & Storch, 2012). Processing of feedback collaboratively is one way of directing learners' attention to feedback (Kim, 2015; Qui & Lapkin, 2001). From a theoretical perspective, peer discussion of corrections can facilitate deeper internal engagement with feedback (i.e. noticing) (Schmidt, 1990; Swain, 2005) and thereby is more likely to result in uptake (Wigglesworth & Storch, 2012) and retention of target language forms (Ferris, 2006). The use of peer discussion is widely viewed as beneficial in language pedagogy because it is learner-centred and provides opportunities for the development of the L2 through interaction.

Previous studies that involved peer discussion following WCF, have reported that it led to linguistically more accurate writing. For example, Kassim and Luan (2014) carried out a qualitative analysis of collaborative dialogue and found that it enhanced the effects of WCF. Their study, however, failed to show that accuracy gains were sustained in the delayed posttests. Kim and Emeliyanova (2019) examined both individual and collaborative processing of feedback followed by the opportunity to revise in both cases. They found that both conditions contributed equally to improvement in overall linguistic accuracy. Storch and Wigglesworth (2010) investigated the effect of pair talk following WCF and reported that pair discussions enhanced student engagement and uptake of feedback as shown in their revisions. The study I undertook differed from these earlier studies in a number of ways.

Previous studies that examined the effect of collaboration involved indirect types of WCF. For example, Kassim and Luan (2014) included indirect unfocused and indirect focused (coded) WCF. The students in Kim and Emeliyanova's study (2019) received only indirect unfocused (coded) WCF. Storch and Wigglesworth (2010) compared the effects of both reformulation (a form of direct) WCF and indirect (coded) WCF and found that uptake was higher following indirect correction than reformulation. By and large, previous research on the collaborative processing of feedback (Storch & Wigglesworth, 2010a, 2010b) has shown that indirect WCF is more effective than direct WCF. In contrast, I examined the effect of direct correction followed by pair work. One problem with indirect WCF is that the

learners might repeat the same errors if they are unable to process the feedback. In contrast, explicit correction in the form of direct WCF allows them to notice the gap between the correct forms and their own faulty hypotheses, and the requirement of peer discussion may also enable them to induce the underlying rules of the corrected features.

In summary, the current study adds to the findings of previous research by showing that WCF plus peer discussion can lead to gains in accuracy in subsequent writing. The study demonstrates that although the effect of WCF+D did not result in linear development, it did lead to a gradual gain in accuracy over time. It is important to note, however, that the design of my study did not allow me to investigate whether WCF+ D was more effective than WCF by itself. That awaits further investigation.

### **5.5 The Effect of WCF + Revision versus WCF + Peer Discussion on Linguistic Accuracy**

This section addressed the following research question;

RQ5: Is there any difference in the effects of semi-focused WCF on linguistic accuracy in problem-solution texts over time between learners who revised their writing following WCF (i.e.WCF+R) and learners who discussed the feedback in pairs (i.e. WCF +D)?

#### **5.5.1 Results**

The previous results have shown that both WCF + R and WCF + D groups outperformed the control group over time. Research Question 5 extends the analysis by asking whether there was any difference in the effect of semi-focused WCF on linguistic accuracy in problem-solution texts over time between the learners who revised their writing following WCF and those who discussed the feedback in pairs. To address this research question, I compared the accuracy scores of the group that received WCF and then revised (WCF +R) with the group that received WCF with opportunity to discuss the feedback but with no opportunity to revise (the WCF+D). These two groups were similar in that they both received feedback but different in that they were asked to respond to the feedback. I have also included the Control group in this analysis in order to see the comparative effect of WCF+R and WCF+D in relation to the Control group.

First, I reported the descriptive statistics for accuracy of the finite verbs in all the 10 tasks for the WCF+D and WCF+R and Control groups. Then, a repeated measures ANOVA

(3 groups x 10 times) was conducted to examine between-group differences followed by post-hoc ANOVAs to identify where the group differences lay. One-way ANOVAs were conducted to investigate whether there were any significant group differences on each task.

Table 31 provides the descriptive statistics for the WCF+D, WCF+R and Control groups from Task 1 to Task 10. Figure 9 is a graphic illustration of the development in accuracy of the groups across the 10 tasks. Table 33 shows the effect sizes for the group comparisons. As can be seen in Table 31, the three groups differed initially in their mean accuracy scores in Task 1. The Control group produced linguistically more accurate texts than both the WCF groups in Task 1 while the WCF+D group was more accurate than WCF+R (i.e. Control > WCF+D > WCF+R). Both the Control and WCF+D groups performed better than the WCF+R group in Tasks 1 and 2. From Task 3 onwards, however, the WCF+R group was more linguistically accurate than both the WCF+D and Control groups, showing a steady improvement in accuracy scores over time. The WCF+D group also produced gradually more accurate texts from Task 3 to Task 10 than the Control group but with more fluctuations in accuracy over time. The WCF+D's highest accuracy score was in the final task. As is also illustrated in Figure 9, there was a gradual decrease in accuracy scores for the Control group up to Task 10.

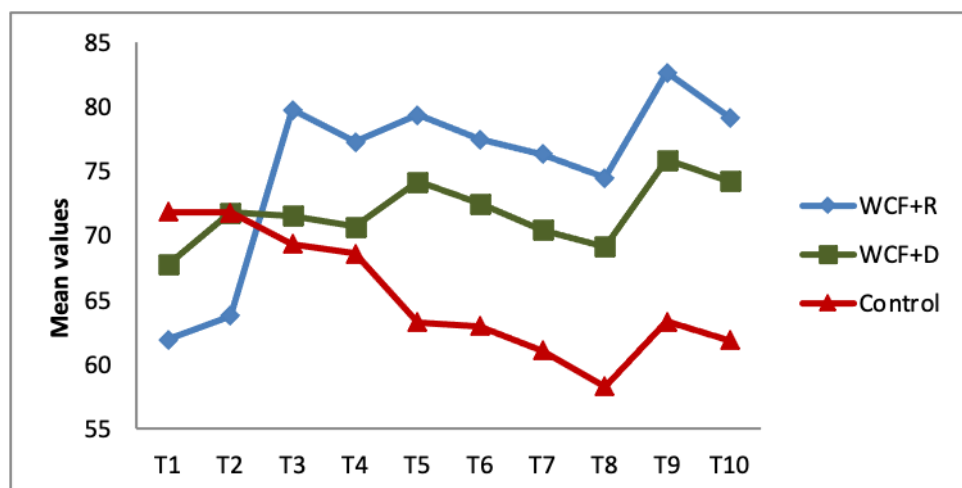
**Table 31**

*Descriptive Statistics for Accuracy of the Finite Verbs for the WCF+R, WCF+D and Control Groups*

Task	WCF+R(N=30)		WCF+D (N=31)		Control (N=30)	
	Mean	SD	Mean	SD	Mean	SD
Task 1	61.92	18.17	67.75	13.25	71.83	13.7
Task 2	63.77	11.5	71.81	11.1	71.82	18.76
Task 3	79.78	16.16	71.56	15.05	69.38	18.81
Task 4	77.27	13.33	70.69	18.58	68.6	23.68
Task 5	79.34	12.18	74.18	12.23	63.28	19.71
Task 6	77.45	10.28	72.48	13.82	62.97	17.26
Task 7	76.31	10.85	70.47	15.65	61.09	18.16
Task 8	74.51	12.52	69.17	15.22	58.32	22.43
Task 9	82.65	11.05	75.87	11.36	63.34	19.02
Task 10	79.16	7.64	74.22	11.17	61.89	17.28

**Figure 9**

*Groups' Mean Scores for Accuracy in Obligatory Occasions*



A repeated measures ANOVA (3 groups x 10 times) was used to compare the groups' accuracy scores. There was a statistically significant difference for group ( $F(1.580) = 7.702$ ,  $p = .003$ ), for time ( $F(6.754) = 3.175$ ,  $p = .004$ ) and for time-group interaction ( $F(9.751) =$

5.542,  $p = .000$ ). Post-hoc pairwise group comparisons showed that the differences were statistically significant between the Control group and the WCF+R group ( $p = .008$ ) and there was a near significance difference for the Control/ WCF+D pair ( $p = .078$ ) However, there was no statistically significant between-group difference for the WCF+R/ WCF+D pair ( $p = .166$ ).

As reported previously, there were statistically significant differences between the WCF+R and Control group on every task, with large effect sizes from Task 5 onwards. The between group differences for the WCF+D/ Control pair reached statistical significance from Task 5 onwards with effect sizes becoming large at Task 9 ( $p = .000$ ,  $d = .79$ ) and Task 10 ( $p = .000$ ,  $d = .84$ ). There were no statistically significant differences between the WCF+R group and the WCF+D group for any of the 10 tasks but there were small to medium effect sizes in favour of the WCF+R group from Task 3 onwards. Overall, both the WCF+R and WCF+D groups showed increased linguistic accuracy over time. However, the effect of WCF+R was stronger than WCF + D as evident in the effect sizes shown in Table 32.

**Table 32***Effect Sizes*

	WCF+R/ Control	WCF+D /Control	WCF+R/ WCF+D
Task 1	0.62	0.30	0.36
Task 2	0.51	0	0.71
Task 3	0.59	0.12	0.59
Task 4	0.45	0.09	0.43
Task 5	0.98	0.66	0.42
Task 6	1.02	0.60	0.40
Task 7	1.01	0.55	0.40
Task 8	0.89	0.56	0.38
Task 9	1.24	0.79	0.60
Task 10	1.29	0.84	0.51
Overall effect size	0.60	0.40	0.24

**5.5.1 Summary**

1. The difference in accuracy scores between the two WCF groups was not statistically significant. However, there was a small advantage for the WCF+R as shown in the small to medium effect sizes.
2. Both the WCF groups outperformed the Control group with the WCF+R group showing a stronger effect on learners' linguistic accuracy than the WCF+D group in terms of comparisons with the Control group.

**5.5.2 Discussion**

Previous research has shown that asking learners to engage with feedback, either individually by revising their original drafts or collaboratively in peer/ group discussion, facilitates L2 acquisition. In other words, there is positive evidence that asking learners to revise their writing (e.g. Chandler, 2003; Shintani & Ellis, 2013; Shintani et al., 2014) or

discuss in pairs (Kassim & Luan, 2014) in response to WCF helps them process the feedback. Kim and Emeliyanova (2019) examined the extent to which collaboration facilitated learners' revision behaviour following WCF and reported a positive effect for both the collaboration (i.e. revision + peer discussion) and self-correction. However, their study did not include a control group. Swain and Lapkin (2002) reported that collaborative involvement of a variety of tasks (peer discussion and revision) following feedback resulted in learning. However, to the best of my knowledge, no study has compared the effect of revision or peer discussion.

Research Question 5 addressed this research gap by examining whether there was any difference in the effects of WCF according to whether the students were asked to revise their writing following corrections (i.e. the WCF+R group) or discuss the feedback in pairs (i.e. the WCF+D group). To answer this question, the accuracy scores of the WCF+R and WCF+D groups were compared with those of the group that did not receive any feedback or opportunity to revise or discuss (i.e. the Control group). The results revealed that both groups improved in accuracy over time but that there was no statistically significant difference between the two groups. There was, however, some evidence that asking the students to revise was more effective in promoting accuracy in new writing than asking them to discuss their errors. The effect size for the WCF+R/Control groups comparison ( $d = .60$ ) was larger than that for the WCF+D/Control pair ( $d = .40$ ). Also, the WCF+R Group gained more than the WCF+D group from T1 – T10 (WCF+R:  $d = .93$ , WCF+D:  $d = .53$ ).

Thus, one of the key findings of my study is that both revising and peer discussion in response to WCF can lead to more linguistically accurate new writing. This finding supports the claim that receiving WCF, combined with opportunities to attend to the corrections (e.g. by revising or peer discussion), prompts learners to 'notice-the-gap' between the teachers' input and their output leading to linguistically more accurate new writing (Ellis, 1993; Williams, 2012). In other words, having learners attend to the feedback, either individually or collaboratively, enables them to process it more effectively and deeply. This process may facilitate the development of their explicit L2 knowledge of linguistic structures (N.C. Ellis, 2005; R. Ellis, 1993). It is also possible that WCF combined with repeated opportunities for revision/ peer discussion assists the development of implicit knowledge (Ellis, 1994; Swain & Lapkin, 1995; Williams, 2012) but the design of my study does not allow any conclusions regarding this.



Asking students to revise appears to have been somewhat more effective than peer discussion. Previous research has also reported that WCF plus revision can lead to more accurate writing (e.g. Chandler, 2003; Shintani et al., 2014). Other studies (e.g. Kassim & Luan, 2014; Storch and Wigglesworth, 2010) have shown that asking students to discuss the corrections can also lead to improved writing. A possible reason for the superiority of the WCF+R group is that the students were more cognitively engaged when revising than when discussing corrections with a peer because revising required them to take responsibility for their own writing (i.e. it gave them a sense of ownership) which may not have been the case with peer discussion (see Kim & Emeliyanova, 2019). Wigglesworth & Storch (2012) reported that indirect WCF facilitated greater engagement than explicit correction in the form of reformulation suggesting that peer discussion might work better with indirect WCF than direct WCF.

This difference in the findings of the two techniques can be explained further with references to students' Exit Questionnaires. The student responses revealed that they viewed revision as more advantageous than peer discussion (*see* section 4.4). They were positive about revision for four main reasons (1) it helped them attend to problems in their writing (2) it improved their writing skills, (3) it prompted them to reflect on their previous writing and (4) they found it motivating. In contrast, the students who took part in peer discussion responded negatively. They reported that it was time consuming as they only had time to focus on the most frequent errors in their writing. The questionnaire responses suggest that affective factors such as students' perceptions and motivation can also have an impact on the success of learners' engagement with WCF (Ellis, 2010).

Summing up, the current study has shown that both revision and peer discussion in combination with WCF lead to improved accuracy in subsequent writing; revision was, however, somewhat more effective than peer discussion. The students held a more positive view of revision than peer discussion. It should be pointed out again that it is not possible to say whether the opportunity to revise or engage in peer discussion added to the effect of WCF as there is no group that just received WCF.

## 5.6 The Effect of Feedback (WCF or Content Comments) on Accuracy in New Texts

This section reports the results and discussion for Research Question 6;

RQ6: Is there any difference over time in the effects of direct semi-focused WCF, with or without opportunity to revise (i.e. WCF+R and WCF+D), on linguistic accuracy and the effects of feedback on content with opportunity to revise (i.e. CON+R)?

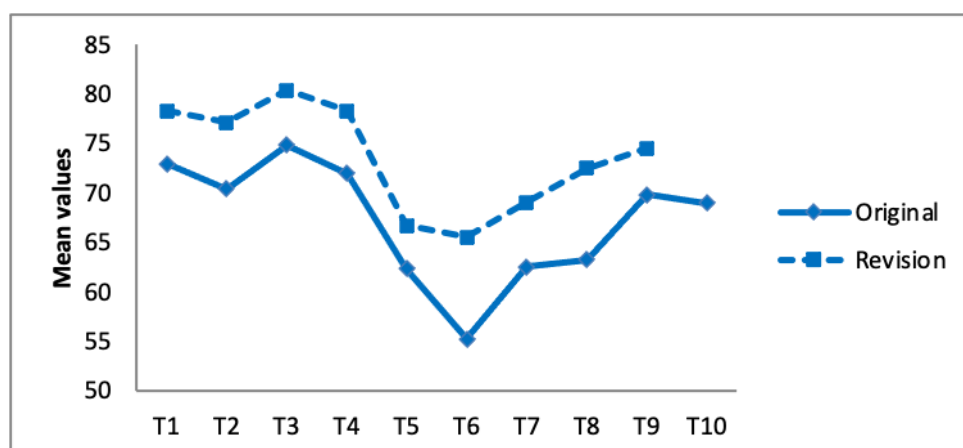
### 5.6.1 Results

Research Question 6 examined whether there was any significant difference in accuracy between the students who revised following WCF and those who received content feedback and then revised. To answer this research question, I will first report the results for both groups' accuracy in the revised texts and then in the new texts. This will be followed by a discussion of the results.

**5.6.1.1 Accuracy in Revised Texts following Content Feedback.** Table 33 provides the descriptive statistics for the original and revised texts of the CON+R group in the nine tasks. Figure 10 displays the mean accuracy scores of the group's original and revised drafts. As can be seen in Figure 10, there is a difference in the accuracy scores between the original and revised drafts for all the nine tasks. The students produced more linguistically accurate writing in revisions of their original texts.

**Table 33***Descriptive Statistics for Accuracy of the Original and Revised Drafts*

Accuracy	CON+R (N =32)			
	Original		Revision	
	Mean	SD	Mean	SD
Task 1	72.96	13.48	78.30	11.79
Task 2	70.40	15.18	77.12	9.80
Task 3	74.84	15.93	80.34	12.85
Task 4	71.94	13.86	78.25	11.89
Task 5	62.31	17.75	66.69	15.49
Task 6	55.23	16.42	65.50	16.09
Task 7	62.50	14.55	69.03	13.16
Task 8	63.25	14.85	72.48	13.80
Task 9	69.80	15.37	74.49	14.29
Task 10	68.94	12.92		

**Figure 10***Mean Scores for Accuracy of the Original and Revised Drafts*

A repeated measures ANOVA (2 conditions x 9 times) was computed to examine whether there was any statistically significant difference between the two sets of scores. The difference was statistically significant for condition ( $F(1,000) = 91.19, p = .000$ ), time ( $F(8,000) = 9.91, p = .000$ ) but not for the time-condition interaction ( $F(8,00) = 1.35, p = .267$ ). Pairwise group comparisons using a t-test showed that there was a significant difference on every task: Task 1 ( $p = .003, d = .42$ ), Task 2 ( $p = .001, d = .52$ ), Task 3 ( $p = .002, d = .38$ ), Task 4 ( $p = .006, d = .48$ ), Task 5 ( $p = .04, d = .26$ ), Task 6 ( $p = .000, d = .63$ ), Task 7 ( $p = .003, d = .47$ ), Task 8 ( $p = .000, d = .64$ ) and Task 9 ( $p = .000, d = .31$ ). In other words, the CON+R group was more linguistically accurate in the revised texts in all nine writing tasks.

Also, the study sought to examine whether the improvement in accuracy in the revised texts differed depending on whether the students received linguistic feedback (WCF) or content feedback. Table 34 reports the descriptive statistics for accuracy in the revised texts for both the WCF+R and CON+R groups. Figure 11 graphically presents the two groups' accuracy in the revised texts.

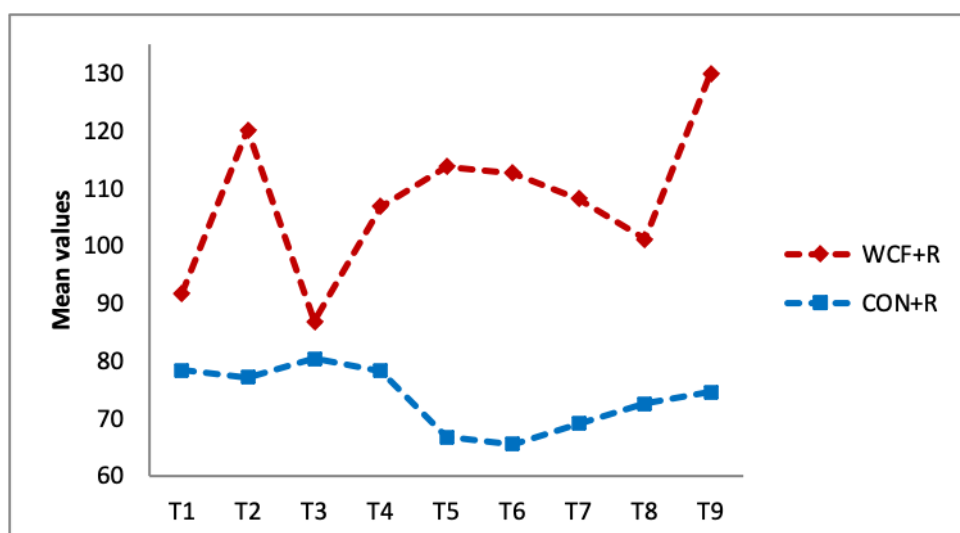
**Table 34**

*Descriptive Statistics for Accuracy of the Revised Drafts in the WCF and Content Groups*

Accuracy	Revision			
	WCF+R (N =30)		CON+R (N =32)	
	Mean	SD	Mean	SD
Task 1	91.70	26.52	78.30	11.79
Task 2	120.13	33.24	77.12	9.80
Task 3	86.83	28.35	80.34	12.85
Task 4	106.80	26.13	78.25	11.89
Task 5	113.76	29.81	66.69	15.49
Task 6	112.60	34.68	65.50	16.09
Task 7	108.16	29.81	69.03	13.16
Task 8	101.16	36.43	72.48	13.80
Task 9	130.00	34.14	74.49	14.29

**Figure 11**

*Two Groups' Mean Scores for Accuracy in the Revised Texts*

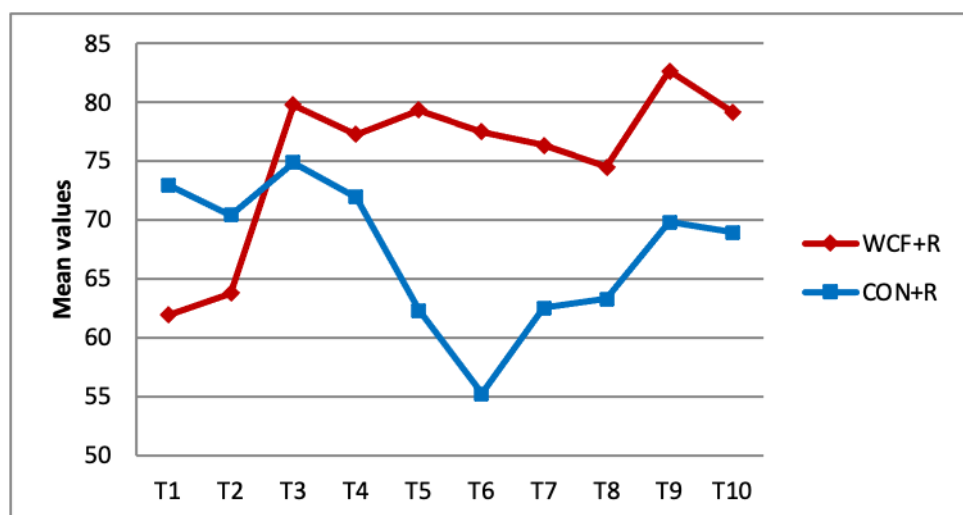


A repeated measures ANOVA (2 conditions x 9 times) was computed to examine whether there was any statistically significant difference between the two sets of accuracy scores. The results revealed that the difference was statistically significant for group ( $F(1.000) = 201.05, p = .000$ ), time ( $F(6.09) = 7.07, p = .000$ ), and for time-group interaction ( $F(6.16) = 8.19, p = .000$ ). Pairwise group comparisons using a t-test showed that there was a significant difference on every task: Task 1 ( $p = .000, d = .65$ ), Task 2 ( $p = .000, d = 1.75$ ), Task 3 ( $p = .000, d = .29$ ), Task 4 ( $p = .000, d = 1.40$ ), Task 5 ( $p = .000, d = 1.98$ ), Task 6 ( $p = .000, d = 1.74$ ), Task 7 ( $p = .000, d = 1.69$ ), Task 8 ( $p = .000, d = 1.04$ ) and Task 9 ( $p = .000, d = 2.12$ ). The WCF+R group produced more accurate revisions than the CON+R group with large effect sizes for seven tasks out of the nine tasks. In other words, the linguistic feedback led to more accurate revised texts than the content comments.

**5.6.1.2 Effect of Feedback (WCF or Content Comments) on Accuracy in New Texts.** I next examined whether there was any difference in the linguistic accuracy of new texts between the WCF+R and CON+R groups. Table 35 gives the descriptive statistics and effect sizes for the WCF+R and CON+R groups for the 10 tasks. The mean scores for both groups are displayed in Figure 12. Shapiro-Wilk tests showed that the distribution of accuracy scores in the original and revised drafts were normally distributed. As is shown in Table 36, the CON+R group was more accurate than the WCF+R group in Tasks 1 and 2 but from Task 3 WCF+R group had become more linguistically accurate and continued to be so in the subsequent tasks, with large effect sizes from Task 5 onwards. In contrast, the CON+R group' scores declined slightly over time.

**Table 35***Descriptive Statistics and Effect Sizes for Accuracy for Ten Tasks*

	WCF+R (N=30)		CON+R (N=32)		Effect sizes
	Mean	SD	Mean	SD	
<b>Task 1</b>	61.92	18.17	72.96	13.48	0.69
<b>Task 2</b>	63.77	11.50	70.40	15.18	0.49
<b>Task 3</b>	79.78	16.16	74.84	15.93	0.30
<b>Task 4</b>	77.27	13.33	71.94	13.86	0.39
<b>Task 5</b>	79.34	12.18	62.31	17.75	1.03
<b>Task 6</b>	77.45	10.28	55.23	16.42	1.62
<b>Task 7</b>	76.31	10.85	62.50	14.55	1.07
<b>Task 8</b>	74.51	12.52	63.25	14.85	0.89
<b>Task 9</b>	82.65	11.05	69.80	15.37	0.95
<b>Task 10</b>	79.16	7.64	68.94	12.92	0.96

**Figure 12***Two Groups' Mean Accuracy Scores*

A

repeated measures ANOVA (2 groups x 10 times) was conducted to examine whether there was any statistically significant group difference. The results showed that the differences

reached significance for group ( $F(1.000) = 11.28, p = .002$ ), time ( $F(5.935) = 7.87, p = .000$ ) and also for time-group interaction ( $F(6.343) = 12.81, p = .000$ ). Pairwise comparisons using a t-test showed that there was a significant difference from Task 5 onwards: Task 5 ( $p = .000, d = 1.03$ ), Task 6 ( $p = .000, d = 1.62$ ), Task 7 ( $p = .000, d = 1.07$ ), Task 8 ( $p = .003, d = 0.89$ ), Task 9 ( $p = .001, d = 0.95$ ), Task 10 ( $p = .001, d = 0.96$ ). In all these five tasks, the WCF+R group was more accurate than the CON+R group and the effect sizes were large.

### **5.6.1.3 Summary of Findings.**

Table 36 summarises the main results regarding the effect of feedback (WCF or content) on linguistic accuracy and text length in both the revised texts and new texts.



**Table 36***Summary of Results*

	Revision	New writing
<b>Linguistic Accuracy</b>	CON+R  Content feedback led to greater accuracy in revised texts	a) Revision following content feedback resulted in more accurate writing.
	CON+R versus WCF+R  The WCF+R group showed greater accuracy than the CON +R group in the revised texts	b) WCF+R led to more accurate new writing than CON+R

**5.6.2 Discussion**

Previous studies have investigated the effect of form and content feedback on revised texts (Dessner, 1991; Fathman & Whaley, 1990; Olson & Raffeld, 1987). For example, Dessner (1991) reported that both form and content-focused feedback led to linguistically and rhetorically improved revised texts. However, Dessner provided both form and content feedback on the same draft. Olson & Raffeld (1987) examined the effects of content and linguistic feedback on the overall quality of learners' writing and found that the content comments led to better revised drafts. However, their study did not provide an explicit definition of 'better texts'. Also, these studies did not show whether content feedback led to improved linguistic accuracy in the revised texts. Fathman and Whalley (1990), however, examined the effect of content and linguistic feedback on both content and/or form in revised texts and reported that they both resulted in improvements in both linguistic accuracy and content. A limitation of this study is that it did not go on to investigate the effect of these feedback types on new writing. The present study partially replicates the Fathman and Whalley study by investigating the effect of linguistic and content feedback on the linguistic accuracy of revised texts and extends it by also examining their effect on new writing.

The results showed that there was a significant improvement in the group's linguistic accuracy from original text to revised text following content feedback. In other words, although students did not receive linguistic feedback, content feedback helped them produce more linguistically accurate revisions. A possible explanation is that addressing content and organisation issues that arose in the problem-solution tasks led them to attend closely to their original writing which, in turn, helped them to notice and successfully correct some of the linguistic errors when they revised. The content feedback also led to longer texts when they revised. This suggests they were trying to improve their drafts by incorporating the teacher's content-related comments. In other words the Content feedback benefited both linguistic accuracy and content in the revised texts.

The focus of research question 6, however, was whether there was any difference in accuracy in new texts depending on whether the students received linguistic feedback or content feedback. The WCF+R group showed greater accuracy than the CON +R group in new texts. In other words, where linguistic accuracy was concerned, the students benefitted more from linguistic feedback than content comments. This finding differs from the findings of previous studies (Kepner, 1991; Pashazadeh, 2017; Sheppard, 1992) that did not find any significant advantage for the WCF treatment in comparison to the content feedback. The most likely reason for this difference was that the feedback in my study was of the direct kind, providing learners with the corrections they needed when revising, which led to increased accuracy in new texts. In contrast, content feedback left the students to rely on their existing linguistic resources when making linguistic corrections.

The students' responses in the Exit Questionnaires revealed that they found revising to be effective irrespective of whether they received content feedback or linguistic feedback but they responded more positively to revising following WCF than content feedback. Also, some students in the CON+R group commented negatively about not receiving linguistic feedback. Overall, the students preferred WCF to content feedback, a finding that is consistent with previous studies (e.g., Amrhein & Nassaji, 2010; Black & Nanni, 2016) that reported that students placed a greater value on grammar feedback than content comments.

Summing up, the current study has shown that content feedback led to greater linguistic accuracy in both revisions and subsequent new writing. However, WCF led to greater accuracy in both revised texts and in new writing than content feedback.

## 5.7 Overall summary of findings

Table 37 presents an overall summary of key findings in relation to the effect of WCF on learners' linguistic accuracy.

**Table 37**

*Summary of Key Findings*

Research Question	Revision	New writing
RQ2. WCF+R vs Control	WCF (original draft < revised text)  • WCF led to more accurate revisions	• WCF+ R produced linguistically more accurate new writing texts than the Control group
RQ3. WCF+R <sup>1</sup> vs WCF+R <sup>2</sup>	• There was no advantage for having access to previously corrected drafts when writing a new text.	
RQ4. WCF+D vs Control		• WCF paired with peer discussion resulted in greater gains than no WCF (i.e. the Control Group)
RQ5. WCF+R vs WCF+D  Control group		• WCF followed by both the opportunity to revise and to discuss in pairs led to improved accuracy in subsequent writing.  • WCF + Revision was somewhat more effective than WCF + peer discussion.
RQ6.	• Content feedback led	• Revision plus content comments helped students produce more

WCF+R vs CON+R	<p>to improved revisions.</p> <ul style="list-style-type: none"> <li>• WCF resulted in more accurate revisions than content feedback</li> </ul>	<p>accurate new writing.</p> <ul style="list-style-type: none"> <li>• WCF+R was more effective than CON+R in promoting linguistic accuracy in subsequent writing</li> </ul>
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### 5.8 Concluding Remarks

I have examined the effect of direct semi-focused feedback, in conjunction with revision over time and found it to be effective. The findings of my study can be discussed in relation to the general conclusions made by Bitchener and Ferris (2012). Based on some well-designed recent studies, Bitchener and Ferris suggested a clear advantage for direct WCF for improving learners' linguistic accuracy. In my study, I examined the effect of direct correction on intermediate learners and showed that it leads to accuracy improvement. The current study also addressed some of the research gaps suggested by Bitchener and Ferris (2012). First, it examined the effect of WCF on the acquisition of finite verb constructions which have not yet been examined and found it led to accuracy improvement. Second, from a language learning point of view, the current study investigated the extent to which text revisions followed by WCF facilitated accuracy gains in new writing and found it to be effective. Third, the study also examined the enduring effect of WCF by involving ten shots of feedback over a 10-week period. Fourth, it explored the learning potential of semi-focused WCF over time and reported positive effects for it.

The present study also extended existing research of WCF further. It examined the comparative effects of individual and collaborative techniques – (1) revision and (2) peer discussion- following WCF and reported a greater advantage for the former. The study also found that allowing students to keep their previously corrected drafts when writing a new text facilitates accuracy improvement.

## **Chapter 6. The Effect of Different Feedback Conditions on Writing Fluency**

This chapter addresses the following research question;

RQ7: Does correcting students' writing have an impact on learners' writing fluency?

### **6.1 Overview**

This chapter focuses on the effect that feedback (i.e. WCF or content feedback) had on the learners' writing fluency (i.e. the number of words produced in each text) in their revised drafts and in new writing. Section 6.2 reports whether there was any difference in writing fluency in revised drafts and new texts among the groups that received different feedback conditions. This section is sub-divided into three sub-sections (1) the effect of feedback on the length of revised texts (Section 6.2.3.1), (2) the effect of feedback on text length of new writing (Section 6.2.3.2) and (3) the effect of WCF+R1 (with access to corrections) on the text length of new writing (Section 6.2.3.3). This will be followed by a discussion of results in Section 6.3. At the end of this chapter, a summary of the main findings will be provided (Section 6.3.1).

### **6.2 The effects of feedback on writing fluency**

It is important to examine the effect of WCF on writing fluency because Truscott claimed that WCF can have a negative effect on writing fluency (Truscott, 1996). Chen and Zhang (2021) showed that direct comprehensive feedback contributed to both writing accuracy and fluency. However, no study has examined the effect of semi-focused correction on learners' writing fluency. I examined this in the pilot study and found that WCF did not negatively impact learners' fluency; however, it is possible that the requirement of revision following feedback may have inhibited the students' fluency in writing. I, therefore, examined this further by extending the data collection over 10 weeks in my study.

To examine this, the total number of words a student produced for each task in each group was calculated. The analysis included five treatment groups: (1) the WCF+R (i.e. a group receiving WCF with opportunity to revise), (2) the WCF+D (i.e. a group that received WCF with opportunity to discuss in pairs), (3) the CON+R (i.e. a group that received content feedback and revised), (4) the CON+D (i.e. a group that received content feedback with

opportunity to discuss in pairs) and (5) the Control group (i.e. a group that did not receive any feedback or opportunity to revise/ discuss in pairs). Both the first and second Groups received semi-focused direct WCF while the third and fourth groups were given content feedback. Then, the first and third groups revised their writing following feedback. The second and fourth groups discussed feedback in pairs with no opportunity to revise. The fifth group did not receive any feedback or revision/ discussion opportunity.

### 6.2.1 Test of normality

I computed Shapiro-Wilk tests of normality to see whether the data were normally distributed. Overall, the results indicated that the distribution of the word count in every task for the WCF+R ( $p > .05$ ), the WCF+D ( $p > .05$ ), CON+R ( $p > .05$ ), CON+D ( $p > .05$ ), Control ( $p > .05$ ), WCF+R<sup>1</sup> ( $p > .05$ ), WCF+R<sup>2</sup> ( $p > .05$ ) groups was normal except for three cases that deviated from the normality (WCF+D: Task 1-  $W(31) = .91$ ,  $p = .018$ , Task 8 -  $W(31) = .92$ ,  $p = .03$ ; WCF+R: Task 8 -  $W(30) = .88$ ,  $p = .003$ ). In addition, I found one case that differed from the normality in the word count for the revised drafts of the WCF+R group Task 8-  $W(30) = .90$ ,  $p = .010$ ). These results led me to use both parametric and non-parametric tests to compare the mean number of words across groups. As demonstrated by the Friedman test, non-parametric test showed the same result (Asymp.Sig. =.000) as the parametric tests. Therefore, I will report only the results of the parametric tests in this chapter.

### 6.2.3 Results

**6.2.3.1 Effect of Feedback on the Length of Revised Texts.** To examine whether WCF led to shorter revised texts, the mean number of words in the original and revised drafts of the WCF+R group was calculated (*see* Table 38). In all the nine tasks, the students' revised texts were longer than the original texts. A repeated measures ANOVA (2 conditions x 9 times) showed that there was a statistically significant difference for group ( $F(1.000) = 50.76$ ,  $p = .000$ ), time ( $F(5.70) = 18.06$ ,  $p = .000$ ) and also for time-group interaction ( $F(4.31) = 3.60$ ,  $p = .007$ ). In other words, the WCF+R group wrote more in their revised texts than in their original texts.

**Table 38***Word Count in Original and Revised Drafts*

Word count	WCF+R			
	Original		Revision	
	Mean	SD	Mean	SD
<b>Task 1</b>	75.40	22.34	91.70	26.52
<b>Task 2</b>	114.66	31.99	120.13	33.24
<b>Task 3</b>	77.80	28.93	86.83	28.35
<b>Task 4</b>	97.16	28.41	106.80	26.13
<b>Task 5</b>	107.03	28.98	113.76	29.81
<b>Task 6</b>	108.23	33.48	112.60	34.68
<b>Task 7</b>	103.33	27.44	108.16	29.81
<b>Task 8</b>	96.50	34.43	101.16	36.43
<b>Task 9</b>	126.50	34.09	130.00	34.14

I also investigated whether revision in combination with content comments had any effect on the length of the revised drafts. Table 39 reports the number of words produced by students in both the original and revised drafts. In all nine tasks, the students in the CON+R group produced longer texts in the revised texts than in their original texts. A repeated measures ANOVA (2 conditions x 9 times) revealed that there was a statistically significant difference for group ( $F(1,000) = 112.52, p = .000$ ), time ( $F(6,002) = 12.59, p = .000$ ) and also for time-group interaction ( $F(5,07) 3.26, p = .007$ ). In other words, the students produced more words in their revised writing than in their original texts.

**Table 39***Word Count in Original and Revised Drafts of the CON+R Group*

Word count	CON+R			
	Original		Revision	
	Mean	SD	Mean	SD
<b>Task 1</b>	87.31	32.59	114.00	34.21
<b>Task 2</b>	106.37	34.56	134.71	43.78
<b>Task 3</b>	98.68	32.89	106.15	34.04
<b>Task 4</b>	84.31	34.21	113.81	38.62
<b>Task 5</b>	108.03	34.89	124.56	41.74
<b>Task 6</b>	106.59	41.45	136.65	47.54
<b>Task 7</b>	111.93	39.02	126.4	43.23
<b>Task 8</b>	88.75	38.75	111.62	42.42
<b>Task 9</b>	113.06	34.96	137.78	42.05
<b>Task 10</b>	112.31	36.93		

I then compared the number of words in the revised drafts of the Content and WCF groups. Table 40 gives the mean word length for the nine revision tasks for the two groups. A repeated measures ANOVA (2 conditions x 9 times) showed that there was a statistically significant difference for group ( $F(1.000) = 4.08, p = .05$ ), time ( $F(5.53) = 19.45, p = .000$ ) but not for time-group interaction ( $F(5.74) = 1.20, p = .36$ ). The CON+R group wrote longer texts than the WCF+R group in all nine revision texts.



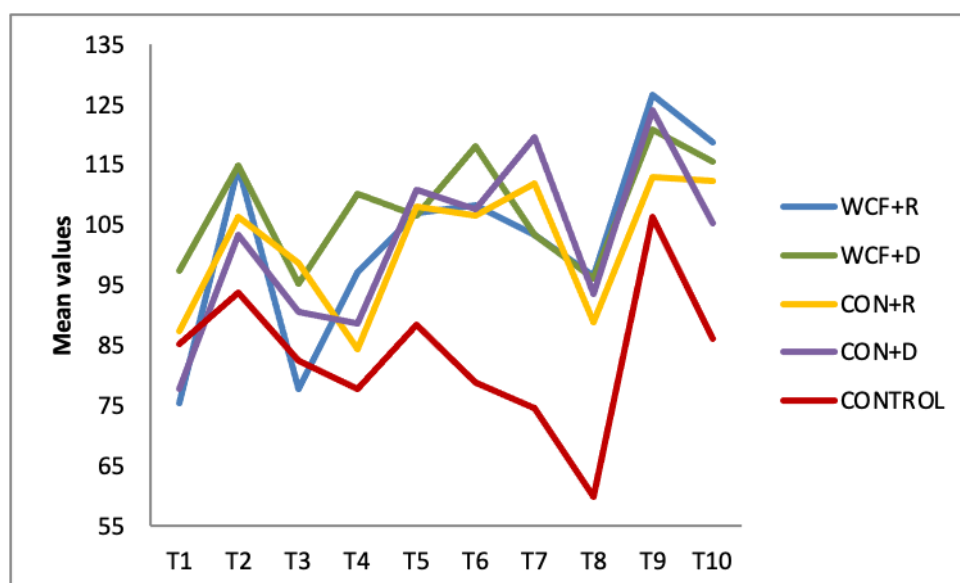
**Table 40***Word Length of Revised Drafts of the Nine Tasks*

Word count	Revised texts			
	WCF+R		CON+R	
	Mean	SD	Mean	SD
<b>Task 1</b>	91.70	26.52	114.00	34.21
<b>Task 2</b>	120.13	33.24	134.71	43.78
<b>Task 3</b>	86.83	28.35	106.15	34.04
<b>Task 4</b>	106.80	26.13	113.81	38.62
<b>Task 5</b>	113.76	29.81	124.56	41.74
<b>Task 6</b>	112.60	34.68	136.65	47.54
<b>Task 7</b>	108.16	29.81	126.40	43.23
<b>Task 8</b>	101.16	36.43	111.62	42.42
<b>Task 9</b>	130.00	34.14	137.78	42.05

**6.2.3.2 The Effect of Feedback on Writing Fluency in New Writing.** Table 41 shows the mean word length for each task for all the groups. Figure 13 plots the changes in script length for all five groups over time. As is shown in Table 41, all the groups wrote longer texts in Task 2 than in Task 1. However, whereas this increase was maintained or increased in the four feedback groups, the number of words for each task in the control group did match those in Task 1 until Task 9.

**Table 41***Word Length of Initial Drafts of the Ten Tasks*

	WCF+R		WCF+D		CON+R		CON+D		CONTROL	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
<b>Task 1</b>	75.40	22.34	97.29	16.05	87.31	32.59	77.67	22.83	85.20	30.47
<b>Task 2</b>	114.66	31.99	114.96	27.57	106.37	34.56	103.38	35.98	93.66	39.00
<b>Task 3</b>	77.80	28.93	95.35	26.22	98.68	32.89	90.48	25.69	82.53	29.22
<b>Task 4</b>	97.16	28.41	110.22	25.05	84.31	34.21	88.61	26.63	77.83	31.81
<b>Task 5</b>	107.03	28.98	106.58	24.61	108.03	34.89	110.9	27.23	88.36	34.08
<b>Task 6</b>	108.23	33.48	118.12	28.00	106.59	41.45	107.71	31.49	78.76	34.41
<b>Task 7</b>	103.33	27.44	103.38	24.75	111.93	39.02	119.51	3.42	74.46	34.02
<b>Task 8</b>	96.50	34.43	96.12	27.15	88.75	38.75	93.61	21.96	59.8	31.08
<b>Task 9</b>	126.50	34.09	120.87	26.99	113.06	34.96	124.00	32.78	106.3	45.34
<b>Task 10</b>	118.76	23.34	115.45	26.52	112.31	36.93	105.38	31.68	86.13	41.39

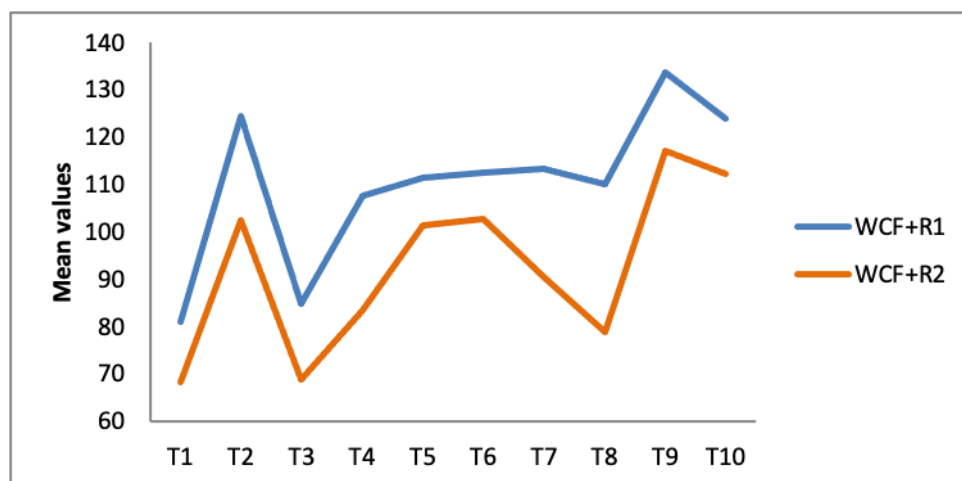
**Figure 13***Five Groups' Mean Scores for Fluency Scores*

To check whether the differences in the mean word length between the groups reached statistical significance, a repeated measures ANOVA (5 groups x 10 times) involving all 10 tasks was conducted to compare the groups. There was a significant difference for group ( $F(3.588) = 4.980, p = .002$ ), for time ( $F(7.040) = 53.16, p = .000$ ) and for time-group interaction ( $F(15.665) = 5.173, p = .000$ ). Post-hoc pairwise group comparisons showed that the differences were statistically significant between the Control group and the WCF+R ( $p = .033, d = .71$ ), WCF+D ( $p = .003, d = 1.01$ ), the CON+R ( $p = .013, d = .64$ ) and the CON+D ( $p = .002, d = .75$ ) groups with medium to large effect sizes. However, there were no statistically significant differences between WCF+R/WCF+D ( $p = .211, d = .30$ ) and the CON+R/CON+D ( $p = .815, d = .06$ ).

**6.2.3.3 Effect of WCF+R<sup>1</sup> (Access to Corrections) on the Text Length of New Writing.** An additional analysis was done to examine whether the writing fluency of the WCF subgroups (WCF+R<sup>1</sup> and WCF+R<sup>2</sup>) differed for each task by examining the word length in these two subgroups to see if allowing access to the previously corrected text affected writing fluency. Table 43 presents the mean word length for each task along with effect sizes. Figure 14 plots the changes in the WCF sub-groups graphically. As can be seen in Table 42, the WCF+R<sup>1</sup> group produced longer texts than the WCF+R<sup>2</sup> group in every case.

**Table 42***Word Length of Initial Drafts of the Ten Tasks and Effect Sizes*

	WCF+R <sup>1</sup>		WCF+R <sup>2</sup>		Effect sizes
	Mean	SD	Mean	SD	
Task 1	81.00	24.65	68.07	17.11	0.60
Task 2	124.52	29.66	102.53	30.83	0.72
Task 3	84.76	29.47	68.69	26.57	0.57
Task 4	107.58	27.38	83.53	24.4	0.92
Task 5	111.29	28.08	101.46	30.30	0.33
Task 6	112.52	35.19	102.61	31.57	0.29
Task 7	113.17	27.84	90.46	21.67	0.92
Task 8	110.00	37.91	78.84	18.81	1.04
Task 9	133.76	32.45	117.00	35.09	0.49
Task 10	123.82	23.58	112.15	22.17	0.50

**Figure 14***WCF Sub-Groups' Mean Scores for Fluency Scores*

A repeated measures ANOVA (2 Groups x 10 Times) compared the word length of the scripts produced by two sub-groups. There was a statistically significant difference for group ( $F(1.000) = 6.53, p = .025$ ) and time ( $F(4.863) = 25.03, p = .000$ ), but not for time-group interaction ( $F(5.361) = 1.23, p = .304$ ). Pairwise comparisons using t-tests revealed that the group differences reached significance for word count only in Task 7 ( $p = .002, d = .92$ ) and Task 8 ( $p = .003, d = 1.04$ ). Large effect sizes in favour of the WCF+R<sup>1</sup> were found for Task 4, Task 7 and Task 8. In all the tasks the students in the WCF+R<sup>1</sup> wrote more than the students in the WCF+R<sup>2</sup>. In other words, the group that kept their previously corrected scripts produced longer texts than the group that did not.

#### **6.2.4 Summary of Results**

Summing up, the present study examined the effect of feedback on writing fluency in both the revised texts and new texts. As for revised texts, both the WCF+R and CON+R groups produced longer revised texts than their original texts. The CON+R produced longer revised text than the WCF+R group.

With regard to the effect of feedback (WCF and content feedback) on writing fluency, there was a trend for each feedback group to produce longer subsequent texts with minor fluctuations, but this was less evident in the Control group. The WCF+R<sup>1</sup> (i.e. access to previous corrections) produced much longer pieces of writing than the WCF+R<sup>2</sup> (i.e. without access to previous corrections) in every task.

### **6.3 Discussion**

Research Question 7 asked whether feedback led learners to write less over time as suggested by Truscott (1996). Truscott's claim was based on one study that has shown that WCF can result in a decrease in fluency (Semke, 1984). However, another study (Chandler, 2003) indicated that both the experimental and control groups produced longer texts. Chandler's study, however, used a different measure of fluency, that is, he compared the time spent on the first and fifth texts per 100 words. However, neither of these studies that involved revision examined the text length of the revised drafts as occurred in my study.

The present study examined the effects of feedback (WCF or content comments) on the text length of students' subsequent revisions by comparing the accuracy scores of the original drafts and their subsequent revisions. The results showed that there was a significant

increase in fluency from original text to revised text in both the WCF+R and CON+R groups in each task. In other words, neither form feedback nor content feedback hindered students' writing fluency in the revised drafts. Addressing form or content issues through feedback prompted learners to write more. However, interestingly, the texts were longer in the CON+R group than in the WCF+R group in all the nine tasks. In other words, comments directed at ideas or organisation resulted in longer texts than feedback directed at linguistic errors. It is, however, interesting to note that even though students were only required to correct their errors when revising they elected to add extra words.

Second, I examined whether feedback (WCF or content comments) affected the length of new texts. To examine this, the mean word counts of the 10 tasks for each group (WCF+R, WCF+D, CON+R, CON+D and Control) were compared. All four feedback groups produced longer texts than the control group in all the tasks. Also, although the length of the texts varied over the ten tasks in the feedback groups, there was a clear trend to write longer tasks over time. This was less evident in the control group. Feedback, then, far from inhibiting students from writing as Truscott has suggested, actually prompted the students to write more. The students' responses in the Exit Questionnaires showed that the students in the control group responded negatively to the absence of any kind of feedback and this may have impacted their motivation to complete the tasks. Finally, there was no statistically significant difference between the WCF+R/ WCF+D and the CON+R/ CON+D pairs. This is somewhat surprising as peer discussion might have been expected to facilitate longer texts. Again, though, the Exit Questionnaire showed that the students were less positive about peer discussion than revision.

The WCF+R sub-group that was allowed to keep their corrections when writing a new task (WCF+R<sup>1</sup>) produced longer texts than the sub-group that did not have access to their previously corrected scripts (WCF+R<sup>2</sup>). In other words, providing access to previous corrections prompted the students to produce longer texts than otherwise. One possibility is that students may have been able to borrow some text from their previously corrected text.

Overall, the present study showed that feedback, either WCF or content, does not hinder writing fluency in both revised texts and in new writing over time. In other words, feedback appeared to motivate learners to write more. Therefore, the results do not support Truscott's claim (1996) that feedback inhibits students from writing more. My study

extended existing research further by examining whether allowing students to keep previous corrections impacted writing fluency and found this had a positive effect on fluency.

### ***6.3.1 Summary of the Main Findings***

Summing up, my study showed that form or content feedback led to significant increase in fluency in both revised drafts and in new writing. Furthermore, allowing access to previous corrections (WCF) when completing a new text also led to longer texts

## **Chapter 7. The Effect of Task Complexity on Linguistic Accuracy and Writing Fluency**

The research question addressed in this chapter is;

RQ8: What effect does task complexity have on learners' linguistic accuracy and writing fluency over time?

### **7.1 Overview**

This chapter examines whether task complexity (i.e. easy versus difficult tasks) mediated the effect of the different feedback conditions on the learners' linguistic accuracy and writing fluency (RQ8). Section 7.2 reviews how task evaluation was carried out in the study. Section 7.2.1 presents the results of Research Question 8 which asked about the effect of task complexity on learners' accurate use of finite verbs and fluency (i.e. the number of words produced in each writing task) according to the teachers' (Section 7.2.1.1) and students' evaluations (Section 7.2.1.1). Each of these two sections is divided into two main sub-sections: (1) task complexity and linguistic accuracy, and (2) task complexity and writing fluency. This is followed by a discussion of the results (Section 7.3). The chapter ends with a summary of the main findings (see Section 7.3.1).

### **7.2 The Influence of Task Complexity**

I decided to examine whether task complexity influenced the effect of the different feedback conditions on the learners' linguistic accuracy because the pilot study indicated that task complexity might have influenced the effect of WCF. In the pilot study, I found that the positive effects of WCF disappeared in the third task, which I suggested was because it was more difficult than the other two tasks. The third task involved writing a formal letter to a newspaper about a community problem and prompted the use of passive constructions which were not needed in the first two tasks.

#### **7.2.1 Results**

**7.2.1.1 Teachers' Evaluations of Task Complexity.** The complexity of the 10 tasks was evaluated by experienced teachers before the study began (*see* Method Chapter). The teachers' ratings for task 'easiness' and 'familiarity' were combined to derive a mean difficulty rating for each task. Then, the tasks were categorized as 'easy/ familiar' or



‘difficult/ unfamiliar’ (see Table 43). Teachers evaluated Tasks 1, 3, 5, 7 and 9 as ‘easy’ and Tasks 2, 4, 6, 8, 10 as ‘difficult’.

**Table 43**

*'Easy/ Familiar' and 'Difficult/ Unfamiliar' Tasks According to the Teachers' Ratings*

		Easy Tasks		Difficult Tasks	
Least Difficult ↑	Task 1	5.11		Task 2	4.11
	Task 3	4.55		Task 6	3.66
	Task 5	4.44		Task 4	3.67
	Task 9	4.22		Task 8	3.22
	Task 7	4.22		Task 10	3.11
					↓ Most Difficult

### 1) Effect of task complexity on linguistic accuracy according to teachers' ratings

Table 44 shows the accuracy scores of the ‘difficult/ unfamiliar’ and ‘easy/ familiar’ tasks for the WCF+R, WCF+D, CON+R, CON+D and Control groups. The descriptive statistics of the combined accuracy scores for the five difficult and the five easy tasks of each group are presented along with effect sizes in Table 45. As shown in Table 45, in all the groups, the mean accuracy scores for the ‘difficult/unfamiliar’ tasks were slightly higher than those for the ‘easy/ familiar’ tasks. However, as effect sizes indicate, the differences between ‘easy’ and ‘difficult’ tasks were minimal.

**Table 44***Mean Scores for the 'Difficult' and 'Easy' Tasks of Each Group as Rated by Teachers*

	WCF+R		WCF+D		CON+R		CON+D		Control	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Difficult/Unfamiliar Tasks										
Task 1	61.92	18.17	67.75	13.25	72.96	13.48	74.07	13.29	71.83	13.70
Task 3	79.78	16.16	71.56	15.05	74.84	15.93	68.93	14.65	69.38	18.81
Task 5	79.34	12.18	74.18	12.23	62.31	17.75	59.28	17.39	63.28	19.71
Task 9	82.65	11.05	75.87	11.36	69.80	15.37	64.15	13.46	63.34	19.02
Task 7	76.31	10.85	70.47	15.65	62.50	14.55	63.80	13.87	61.09	18.16
Overall	76.00	8.97	71.97	8.59	68.48	11.23	66.04	9.05	65.78	13.09
Easy/Familiar Tasks										
Task 2	63.77	11.50	71.81	11.10	70.40	15.18	73.19	12.94	71.82	18.76
Task 4	77.27	13.33	70.69	18.58	71.94	13.86	68.69	16.34	68.60	23.68
Task 6	77.45	10.28	72.48	13.82	55.23	16.42	55.39	17.65	62.97	17.26
Task 8	74.51	12.52	69.17	15.22	63.25	14.85	52.36	13.76	58.32	22.43
Task 10	79.16	7.64	74.22	11.17	68.94	12.92	63.80	12.10	61.89	17.28
Overall	74.43	6.63	71.67	8.32	65.95	11.01	62.68	9.08	64.55	15.05

**Table 45**

*Descriptive Statistics for Combined Accuracy Scores for the 'Difficult' and the 'Easy' Tasks of Each Group and Their Effect Sizes*

Group	N	Easy/ Familiar tasks		Difficult/ Unfamiliar tasks		Effect sizes
		Mean	SD	Mean	SD	
		WCF+R	30	74.43	6.63	
WCF+D	31	71.67	8.32	71.97	8.59	0.03
CON+R	32	65.95	11.01	68.48	11.23	0.22
CON+D	31	62.68	9.08	66.04	9.05	0.37
Control	30	64.55	15.05	65.78	13.09	0.08

## 2) Effect of task complexity on writing fluency according to teachers' ratings

Table 46 shows the mean number of words produced by each group in 'easy/familiar' and 'difficult/unfamiliar' tasks along with their effect sizes. An ANOVA (5 groups x 2 task types) indicated that the differences were statistically significant for group ( $F(3.58) = 4.98, p = .002$ ) and group-task interaction ( $F(3.78) = 13.91, p = .000$ ) but not for task type ( $F(1.00) = 9.08, p = .733$ ). Pairwise comparisons using a t-test showed that the difference between the mean number of words for easy and difficult tasks was statistically significant for all the groups: the WCF+D ( $p = .000, d = .37$ ), the WCF+D ( $p = .004, d = .28$ ), the CON+R ( $p = .036, d = .13$ ), the CON+D ( $p = .020, d = .20$ ) and the Control groups ( $p = .001, d = .27$ ). While both the WCF groups wrote longer texts in the 'difficult tasks', the text length was greater for the 'easy tasks' than for the 'difficult tasks' in the CON+R, CON+D and the Control groups. However, effect sizes were all negligible or small.

**Table 46**

*Descriptive Statistics for the Groups' Mean Word Count in 'Easy/ Familiar' and 'Difficult/ Unfamiliar' Tasks*

Group	N	Easy/ Familiar tasks		Difficult/ Unfamiliar tasks		Effect sizes
		Mean	SD	Mean	SD	
		WCF+R	30	98.01	23.28	
WCF+D	31	104.70	20.60	110.98	22.82	0.28
CON+R	32	103.81	29.69	99.67	32.81	0.13
CON+D	31	104.52	22.52	99.74	23.85	0.20
Control	30	87.37	31.44	79.24	26.96	0.27

**7.2.1.2 Students' Evaluations of Task Complexity.** I also investigated whether accuracy scores in the tasks differed according to the students' ratings by using the questionnaire they completed after each task. The tasks were sorted into 'easy/familiar' and 'difficult/unfamiliar' types for each group according to their ratings. There was considerable inconsistency in the different groups' ratings of task complexity. However, as shown in Table 47, all the groups evaluated Tasks 4, 8 and 10 as 'difficult' and Tasks 3 and 5 as 'easy'.

**Table 47***Students' Ratings of Tasks*

	WCF+R		WCF+D		CON+R		CON+D		Control	
Task 1	3.53	D	3.5	D	3.88	E	3.8	E	3.47	E
Task 2	3.56	D	3.54	E	3.75	E	3.65	E	3.5	E
Task 3	3.67	E	3.52	E	3.71	E	3.35	D	3.46	E
Task 4	3.61	D	3.25	D	3.62	D	3.47	D	3.49	D
Task 5	3.97	E	3.87	E	3.76	E	3.6	E	3.54	E
Task 6	3.8	E	3.8	E	3.54	D	3.48	E	3.33	D
Task 7	3.88	E	3.52	D	3.9	E	3.15	D	3.44	D
Task 8	3.53	D	3.2	D	3.65	D	3.11	D	3.06	D
Task 9	3.66	E	3.52	E	3.42	D	3.5	E	3.5	E
Task 10	3.63	D	3.25	D	3.44	D	3.07	D	3.2	D

*Note.* E: Easy Tasks; D: Difficult Tasks

### 1. Effect of task complexity on linguistic accuracy according to students' ratings

Tables 48, 49, 50, 51 and 52 show the mean accuracy scores and standard deviation for the easy/ familiar and difficult/ unfamiliar tasks in each of the groups WCF+R, WCF+D, CON+R, CON+D and Control groups. As shown in these tables, all the groups produced greater mean accuracy score for the easy/ familiar tasks than that for the difficult/ unfamiliar tasks. In other words, groups were more accurate in tasks that they rated as easy/ familiar than difficult/ unfamiliar, irrespective of whether they received feedback and also regardless of the feedback type.

An ANOVA (5 groups x 2 task types), using the three tasks the students in all the groups rated as more difficult (Tasks 4, 8 and 10), and the three tasks most of the groups found very easy (Tasks 3, 5 and 9), showed there were statistically significant differences for both group ( $F(3, 27) = 22.98, p = .000$ ), task type ( $F(1, 29) = 5.517, p = .026$ ) but not for group-task interaction ( $F(3, 27) = .782, p = .515$ ). Pairwise comparisons using a t-test showed that the difference between the mean scores for easy and difficult tasks was statistically significant only for the WCF+R group ( $p = .040, d = .96$ ) with a large effect size.

**Table 48***Accuracy Scores for 'Easy/ Familiar' and ' Difficult/ Unfamiliar' Tasks in the WCF+R Group*

<b>WCF+R (N = 30)</b>					
Easy/Familiar	Mean	SD	Difficult/Unfamiliar	Mean	SD
Task 5	79.34	12.18	Task 10	79.16	7.64
Task 7	76.31	10.85	Task 4	77.27	13.33
Task 6	77.45	10.28	Task 2	63.77	11.50
Task 3	79.78	16.16	Task 1	61.92	18.17
Task 9	82.65	11.05	Task 8	74.51	12.52
Easy/Familiar tasks	79.11	8.49	Difficult/Unfamiliar tasks	71.33	7.65
Effect size	0.96				

**Table 49**

*Accuracy Scores for the 'Easy/ Familiar' and 'Difficult/ Unfamiliar' Tasks in the WCF+D Group*

<b>WCF+D (N = 31)</b>						
Easy/Familiar	Mean	SD	Difficult/Unfamiliar	Mean	SD	
Task 5	74.18	12.23	Task 7	70.47	15.65	
Task 6	72.48	13.82	Task 10	74.22	11.17	
Task 2	71.81	11.10	Task 4	70.69	18.58	
Task 9	75.87	11.36	Task 1	67.75	13.25	
Task 3	71.56	15.05	Task 8	69.17	15.22	
Easy/Familiar tasks	73.18	8.30	Difficult/Unfamiliar tasks	70.47	8.99	
Effect sizes				0.31		

**Table 50**

*Accuracy Scores for the 'Easy/ Familiar' and 'Difficult' Unfamiliar' Tasks in the CON+R Group*

<b>CON+R (N=32)</b>					
Easy/Familiar	Mean	SD	Difficult/Unfamiliar	Mean	SD
Task 5	62.31	17.75	Task 9	69.80	15.37
Task 3	74.84	15.93	Task 10	68.94	12.92
Task 2	70.40	15.18	Task 6	55.23	16.42
Task 7	62.50	14.55	Task 4	71.94	13.86
Task 1	72.96	13.48	Task 8	63.25	14.85
Easy/Familiar tasks	68.6	11.17	Difficult/Unfamiliar tasks	65.83	10.87
Effect sizes				0.25	



**Table 51**

*Accuracy Scores for the 'Easy/ Familiar' and 'Difficult/ Unfamiliar' Tasks in the CON+D Group*

<b>CON+D (N=32)</b>					
Easy/Familiar	Mean	SD	Difficult/Unfamiliar	Mean	SD
Task 1	74.07	13.29	Task 4	68.69	16.34
Task 2	73.19	12.94	Task 3	68.93	14.56
Task 5	59.28	17.39	Task 7	63.80	13.87
Task 6	55.39	17.65	Task 8	52.36	13.76
Task 9	64.15	13.46	Task 10	63.80	12.10
Easy/Familiar tasks	65.23	9.33	Difficult/Unfamiliar tasks	62.4	8.97
Effect sizes				0.30	

**Table 52**

*Accuracy Scores for 'Easy/ Familiar' and Difficult/ Unfamiliar' Tasks in the Control Group*

<b>Control (N = 30)</b>					
Easy/Familiar	Mean	SD	Difficult/Unfamiliar	Mean	SD
Task 5	63.28	19.71	Task 7	61.09	18.16
Task 9	63.34	19.02	Task 4	68.6	23.68
Task 2	71.82	18.76	Task 6	62.97	17.26
Task 1	71.83	13.7	Task 10	61.89	17.28
Task 3	69.38	18.81	Task 8	58.32	22.43
Easy/Familiar tasks	67.93	13.46	Difficult/Unfamiliar tasks	62.4	14.75
Effect sizes	0.39				

## 2. Effect of task complexity on writing fluency according to students' ratings

Table 53 gives the descriptive statistics for the different groups' word-count in the 'easy' and difficult' tasks according to students' ratings along with effect sizes. Each group produced a slightly greater number of words in the easy tasks than in the difficult tasks. The effect sizes for easy and difficult tasks are negligible or small for all the groups.

An ANOVA (5 groups x 2 task types) showed that the differences were statistically significant for group ( $F(2.67) = 7.25, p = .000$ ) and group-task interaction ( $F(3.12) = 4.45, p = .005$ ) and near significant difference for task type ( $F(1.00) = 3.16, p = .086$ ). Pairwise comparisons using a t-test showed that the difference between the mean number of words for easy and difficult tasks was statistically significant only for the WCF+D ( $p = .001, d = .31$ ), CON+D ( $p = .005, d = .25$ ) and the Control groups ( $p = .005, d = .51$ ) but not for the WCF+R ( $p = .107, d = .16$ ) and CON+R ( $p = .350, d = .04$ ).

**Table 53**

*Descriptive Statistics for the Groups' Word-Count in 'Easy/ Familiar' and 'Difficult/ Unfamiliar' Tasks*

Groups	Easy/Familiar		Difficult/Unfamiliar		Effect sizes
	(N-3)		(N -3)		
	Mean	SD	Mean	SD	
WCF+R	104.58	25.60	100.56	23.42	0.16
WCF+D	111.18	21.69	104.49	20.93	0.31
CON+R	102.46	29.84	101.00	32.34	0.04
CON+D	104.73	23.26	99.52	22.84	0.22
Control	91.21	32.59	75.4	29.17	0.51

**7.2.1.3 Summary of Results.** Table 54 summarises the main results regarding the effect of task complexity on the learners' linguistic accuracy and writing fluency.

**Table 54***Summary of Results*

Effect of Task complexity	Teachers' ratings	Students' ratings
'Easy' vs 'Difficult' tasks	Teachers evaluated Tasks 1, 3, 5, 7 and 9 as 'easy' and Tasks 2, 4, 6, 8, 10 as 'difficult'.	Group ratings of tasks varied markedly. However, all the groups found Tasks 4, 8 and 10 as 'difficult' and Tasks 3 and 5 as 'easy'.
The effect of task complexity on linguistic accuracy	The mean accuracy scores for 'difficult/unfamiliar' tasks were slightly higher in all the groups than those for 'easy/familiar' tasks	The mean accuracy scores for 'easy/familiar' tasks were greater than those for 'difficult/unfamiliar' tasks in all the groups.
The effect of task complexity on writing fluency	Both the WCF groups produced longer texts in the difficult tasks while the CON+R, CON+D and the Control groups wrote more in easy tasks.	All the groups produced more words in the easy tasks.

**7.3 Discussion**

Research question 8 asked whether task complexity (i.e. easy/ familiar versus difficult/ unfamiliar tasks) mediated the effects of WCF as the results of the pilot study

suggested this might be the case. Some studies have indicated that task features (e.g. task difficulty) have an effect on accuracy (e.g. Ellis et al., 2008; Karim & Nassaji, 2018). However, none of these studies obtained independent measures of task complexity, investigating it only through *post-hoc* analyses of the writing resulting from different tasks. The current study assessed both the teachers' and students' ratings of task difficulty across the ten tasks in order to examine the influence of task complexity on the effects of feedback.

An unexpected finding of this study is that the teachers' and students' ratings of task complexity differed. As rated by teachers, the mean accuracy scores for 'difficult' tasks were slightly greater than those for the 'easy' tasks in all of the groups. On the contrary, irrespective of the treatment they were given, all the students produced linguistically more accurate writing in tasks they rated as 'easy' than 'difficult'. One explanation for the difference between the teachers' and the students' ratings is that the teachers evaluated all the 10 tasks before the study began but the students rated the task immediately after responding to it and/ or after receiving WCF or content feedback on their previously written task. The teachers may have considered the students' general linguistic knowledge (i.e. grammar and vocabulary), their ability to comprehend the task requirements, and their familiarity with the task topic when they rated the tasks. As for students' evaluations, if they believed they had performed the task well, they may have rated it as 'easy' and if they had struggled with completing a task as 'difficult'. In other words, the students' ratings were based on their actual experience of having performed the different tasks whereas the teachers' ratings were predictive. The difference between the teachers' and the students' ratings suggests that the teachers in this study were not able to predict which tasks would be easy or difficult for the students with any accuracy. The students' ratings of the tasks arguably have greater validity. For this reason, I will only consider the results for the students' evaluations of task complexity from now on.

An examination of the ratings provided by the different groups, however, shows that the students were not entirely consistent in their ratings. For example, while the WCF+R and WCF+D groups both rated Tasks 5, 6, 9 and 3 as 'easy' and Tasks 10, 8, 4, 1 as more 'difficult', their ratings of Tasks 2 and 7 varied. Both the CON+R and CON+D groups evaluated Tasks 5, 2, 1 as 'easy' and Tasks 4, 8, 10 as more 'difficult'. However, they evaluated Tasks 9, 3, 6 and 7 differently. Overall, however, all the groups agreed that Tasks 5,

9 were 'easy' and Tasks 4, 8, 10 were 'more difficult'. One possibility is that the differences in the groups' ratings arose because each group received different treatment procedures.

The results indicated that the students in all the groups were more accurate in the tasks they rated as easy. In other words, task complexity mediated the students' linguistic accuracy irrespective of the treatment they received on their writing. However, it is possible that the feedback had some effect on the students' ratings of tasks and so this result should be interpreted with caution.

However, to explain why students were linguistically more accurate in the easy tasks than in the difficult tasks, I examined the individual writing tasks to identify possible reasons behind their task evaluations. In so doing, I examined the students' scripts to identify differences between the easy and difficult tasks. I focused on the four task features namely the effect of topic, task requirements, and the linguistic demands of the tasks.

#### 1. Task topic

As Selinker and Douglas (1985) suggested, learners' use of the L2 varies according to whether the discourse domain involves an everyday topic or a technical topic. The learners are, therefore, more likely to produce linguistically accurate writing in those domains with which they are familiar. This seems to have been the case with my own students. The students produced less linguistically accurate writing in tasks involving unfamiliar social or family issues. For example, Task 8 which was evaluated as 'difficult' involved a social and economic issue arising from a newly introduced commercial project. In contrast, a task the students rated as very easy involved a complaint about the issue of ragging which is a common problem for all the students in their first year (Task 5). Accuracy in the WCF+R group was greater in Task 5 (79.34) than in the more difficult Task 8 (74.51).

#### 2. Task requirements

Selinker and Douglas (1985) noted that tasks with 'a heavy load' of information affected language use. The number of variables the students had to consider when completing a task seems to have impacted on their accuracy scores. For example, while in Task 8 (very difficult) there are a number of variables that the students had to consider such as infrastructure development, self-efficiency, environmental pollution, chances of employment

and facilities, Task 5 (rated as easy) involved only few variables such as ragging and lodging a complaint against it. The students in all the groups were more accurate in Task 5 than in Task 8. It is, therefore, possible that when completing difficult tasks, the students struggled to address the task requirements and, as a result, produced comparatively less accurate writing in more difficult tasks.

### 3. The linguistic demands of the tasks

The tasks the students judged as ‘difficult’ prompted the use of grammatical structures such as the first conditional and passive constructions typically considered to be complex and late acquired. Some examples of their actual language production, taken from Tasks 8 and 10, are shown in Table 55. While Task 10 asked students to respond to an economic and social problem concerning a wife of an army officer and issues of financial and social security due to the death of her husband, Task 8 required the students to respond to a communal issue regarding a commercial project. Task 10 for example asked the students to explain the consequences of different variables (e.g. getting a job, marrying someone, etc.) which required the use of conditional ‘if’, leading to errors. In Task 8 they were asked to discuss the issues a village would encounter if they became cities, which invited the use of passive constructions that also led to errors. Such structures were not found in the tasks the students rated as easy/ familiar. Both of these tasks were evaluated as difficult by the students.

**Table 55**

*The Students' Use of Complex Structures in Difficult Tasks (Tasks 8 and 10)*

<b>Task 10</b>	<b>The first conditional 'if'</b>	<b>Task 8</b>	<b>Passive constructions</b>
S48 (WCF+D)	I marry someone, I <u>losing</u> my only income.  (If I marry someone, I will lose my only income)	S117 (CON+R)	Our village <u>will destroy</u> .  (Our village will be destroyed)
S11 (WCF+R)	If I <u>got marriage</u> , army <u>pension is not receive</u> me.  (If I get married to someone, I will not receive my army pension)	S1 (WCF+R)	The biodiversity <u>will destroy</u> .  (The biodiversity will be destroyed)
S201 (CON+R)	I will do a job I miss my daughter.  (If I do a job, I will miss my daughter)	S118 (CON+D)	Mountains <u>can be flat</u> .  (The mountains will be flattened)
S80 (WCF+D)	If I <u>went</u> to the job, <u>will I can get</u> to answer for my problem.  (If I go to a job, I will get an answer)	S245 (Control)	The village <u>is protect</u> us. (The village should be protected by us)

The differences in accuracy between 'easy/familiar' and 'difficult/ unfamiliar' tasks were clearest in the WCF + R group. The effect size was large ( $d = .96$ ). In other words, while the results indicated that the students' perceptions of task complexity had a mediating effect on accuracy scores in all the groups, regardless of their treatment condition, this effect was strongest when the students had to revise their corrected texts. One reason for this is that the



repeated opportunity for revision following feedback might have helped them to prevent errors recurring in their subsequent writing and, as a result, led to improved accuracy in the easy tasks. However, when the tasks they rated as ‘difficult’ prompted them to use linguistically demanding grammatically structures, one or two sessions of revision + feedback were not sufficient to achieve mastery over new or partially acquired grammatical structures.

The study also found that task complexity mediated the effects of writing fluency regardless of the treatment each group received. In other words, the students wrote more words in the tasks they rated as easy than difficult. Interestingly, the differences between easy and difficult tasks were more clearly evident in accuracy than in fluency. In other words, task complexity had a stronger mediating effect on accuracy than on writing fluency. This is probably because the problem-solution tasks provided learners with a clear structure (i.e. situation – problem- solution – evaluation) that they could follow when completing a task. The tasks also provided them with content that the students could use in their writing. Another possible reason was the limited time allocated to complete each task (e.g. 10 minutes).

Overall, the present study has shown that the students, irrespective of the treatment they received, achieved greater accuracy in the easy/familiar tasks. However, I have also shown that the complex tasks resulted in the students’ attempts to use more advanced grammatical constructions (e.g. passive). These findings lend support to Skehan’s trade-off hypothesis based on his Limited Attentional Capacity Model (Skehan, 1998, 2001, 2003; Skehan & Foster, 2001). This model claims that when performing a complex task, learners’ attention is first drawn to conceptualizing the content of the task resulting in greater linguistic complexity but allowing less attention to be paid to accuracy. In contrast, simpler tasks are less demanding on conceptualizing allowing more attention to be paid to accuracy. The findings do not support the claims of Robinson’s (2001; 2003; 2005) Cognition Hypothesis, according to which complex tasks promote increases in both the complexity and accuracy of written production. Task complexity also had an effect on fluency (measured in terms of the number of words) with the tasks rated as easy/familiar with the students producing more fluent writing. This effect was minimal in the groups that received feedback and only a little more in the control group.

### ***7.3.1 Overall Summary of Findings***

Table 56 presents an overall summary of key findings in terms of the (1) evaluation of task complexity, (2) task complexity and writing accuracy and (3) task complexity and writing fluency and (4) overall effects of task complexity on accuracy and writing fluency.

**Table 56***Summary of Key Findings*

	Key findings
(1) Task evaluation	<p>1. The teachers' and students' ratings of task complexity differed and also the ratings of the different student groups were not entirely consistent.</p> <p>2. Arguably, the students' ratings had greater validity than teachers' task evaluations.</p> <p>3. As for students' evaluations, all the groups agreed that Tasks 4, 8 and 10 were 'difficult' and Tasks 5 and 9 as 'easy'.</p>
(2) Task complexity and writing accuracy	<p>1. Task complexity had a mediating effect on students' linguistic accuracy regardless of their treatments; however, the effects were quite weak except in the WCF+R group.</p> <p>2. The students were more accurate in the tasks they rated as easy than difficult.</p> <p>3. WCF in combination with the opportunity to revise enhanced linguistic accuracy to a greater extent in the easy than in the difficult tasks.</p> <p>3. Task features such as task topic, task requirements and linguistic demands can account for the difference in accuracy in the difficult and easy tasks.</p>
(3) Task complexity and writing fluency	<p>1. All the groups wrote more in the tasks they rated as easy suggesting that task complexity impacted on writing fluency; however, the effect was weak in all the groups except in the control group.</p>

<p>(4) Overall effect of task complexity on accuracy, complexity and fluency</p>	<p>Greater accuracy was evident in the easy/ familiar tasks while the difficult/ unfamiliar tasks led to the use of more complex structures, suggesting a trade-off effect as proposed by Skehan. Task complexity had only a minimal effect on fluency.</p>
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## **Chapter 8. Conclusion**

### **8.1. Introduction**

My thesis is a classroom-based study that investigated the effectiveness of semi-focused teachers' WCF, with and without opportunity for learners to revise, and content feedback on learners' linguistic accuracy and writing fluency. I began by examining the students' perceptions towards the feedback procedures (RQ1). Then, I examined the effect of feedback on learners' linguistic accuracy (RQ2, RQ3, RQ4, RQ5 and RQ6) and writing fluency (RQ 7). Finally, I considered whether task complexity influenced the effect of the different feedback conditions on learners' linguistic accuracy and writing fluency (RQ8). I was motivated to carry out this research because of 1) a personal interest and my observations that the L2 learners in Sri Lankan universities do not make the effective use of the teacher feedback they receive, 2) the fact that there are different and conflicting opinions held by L2 teachers regarding the type of feedback they should use, 3) the lack of a consistent feedback policy in departments of English Language teaching at Sri Lankan universities and 4) theoretical issues that remain unresolved in this particular research area. To explore the effectiveness of WCF, an experimental design was adopted to gather quantitative (quasi-experimental) and qualitative (students' interviews and questionnaire responses) data from five intact groups of first-year undergraduate students at the University of Sri Jayewardenepura in Sri Lanka.

This concluding chapter presents a summary of findings followed by a discussion of the theoretical and pedagogical implications. It also outlines the limitations of the study and offers suggestions for further research.

### **8.2 Summary of Findings**

This summary of findings covers a) students' perceptions towards feedback and revision/ discussion procedures, b) the effect of WCF on linguistic accuracy, c) the effect of different feedback conditions on writing fluency and d) the effect of task complexity on learners' linguistic accuracy and writing fluency.

### ***8.2.1. Students' Perceptions towards Feedback and Revision/ Discussion Procedures***

RQ1 concerned the students' perceptions towards feedback (i.e. WCF/ content feedback), the problem-solution writing tasks, and the revision/ discussion procedures (RQ1). This involved both qualitative (i.e., students' written responses to questionnaires and interviews) and quantitative data (i.e. ordinal responses to questionnaire statements). The main findings are as follows:

1. The WCF+R group was more positively disposed towards receiving feedback than the other groups. All the students in the WCF+R and WCF+D groups viewed WCF positively while only a majority of the CON+R and CON+D groups were positive about content comments. Also, the students in the CON+R, CON+D and Control groups commented negatively on the lack of corrective feedback on their writing.
2. Both the WCF+R and CON+R groups claimed that revising their writing was more helpful than did the WCF+D and CON+D groups. A large majority (88.13%) of the students in the WCF+R and CON+R groups perceived revision as a useful strategy whereas only 11.59% commented negatively. The students in the WCF+D and CON+D responded both positively and negatively to discussing feedback in pairs. They saw earning collaboratively as one of the advantages of peer discussion but they commented negatively on the lack of adequate time to discuss all the errors.
3. A large majority of students held a positive attitude towards the problem-solution writing tasks.

There were three main findings. First, the groups that received WCF found corrective feedback beneficial due to various reasons; (i) WCF helped them to avoid careless mistakes in writing, (ii) WCF was viewed as a preferred alternative to formal writing instruction (iii) WCF enhanced their knowledge of grammar, (iv) WCF helped to make them more confident writers and (v) WCF contributed to improvement in linguistic accuracy. Second, the students preferred WCF to content feedback and found the absence of WCF demotivating. Third, the students held a more positive view towards individual revision than discussing in pairs. This is because they claimed that revising students' writing encouraged them to reflect on their previous writing and helped to improve their writing skills.

Additionally, the problem-solution tasks were found to be motivating, interesting, and the writers felt it improved their writing skills. These findings, therefore, contradict Truscott's claim that WCF is demotivating (1996).

### ***8.2.2. The Effect of Feedback (WCF and Content Comments) on Linguistic Accuracy***

I examined the effect that direct semi-focused WCF, with and without opportunity to revise, had on learners' linguistic accuracy in their revised texts and/or in new writing tasks. This was achieved by calculating the accuracy scores of the WCF+R (which included WCF+R<sup>1</sup> and WCF+R<sup>2</sup> sub-groups), WCF+D and Control groups. The WCF+R group was sub-divided into WCF+R<sup>1</sup> and WCF+R<sup>2</sup> sub-groups. The WCF+R<sup>1</sup> group was allowed to keep their corrections when writing a new text while the WCF+R<sup>2</sup> did not. I also investigated the effect that content feedback plus revision had on learners' linguistic accuracy in the revised and new texts.

The participants completed 10 writing tasks over 10 weeks and received feedback on the first nine of the tasks. The WCF+R and CON+R groups revised each of the first nine tasks following feedback while the WCF+D and CON+D groups discussed feedback in pairs.

The main findings are as follows:

1. A repeated measures ANOVA (2 groups x 9 times) revealed a significant difference between the original and revised drafts in both the WCF+R and CON+R groups. This suggests that, irrespective of the type of feedback, the students were able to make accurate revisions in their original drafts of each task. Improvement in linguistic accuracy was greater in the WCF+R group than the CON+R group.
2. I examined whether there was any difference in accuracy gains between those students who kept their corrections to hand when writing a new text (the WCF+R<sup>1</sup> group) and those who did not keep them to hand (the WCF+R<sup>2</sup> group) (RQ3). A gradual increase of accuracy was observed in both the groups and there was no statistically significant group difference. However, the effect sizes show that the WCF+R<sup>1</sup> group was slightly more linguistically accurate than the WCF+R<sup>2</sup> group.
3. I examined whether WCF plus peer discussion (WCF+D) led to accuracy gains in new writing (RQ 4). The difference between the WCF+D and Control groups was significant from

Task 5 onwards. Overall, the WCF+D group improved steadily while the Control group declined in accuracy.

4. I investigated the effect of WCF on learners' linguistic accuracy between those students who revised their writing and those who discussed feedback in pairs (without opportunity to revise) (RQ5). This was achieved by examining the mean scores of the WCF+R and WCF+D groups compared to the Control group. The difference was significant for group, time, and time x group interaction. Overall, both the WCF groups outperformed the Control group with the WCF+R group demonstrating improvement in comparison to the Control group more clearly than the WCF+D group.

5. Finally, I investigated whether feedback (WCF or content comments), with opportunity to revise, led to increased accuracy in new writing (RQ6). The WCF+R group increased in accuracy steadily while the Control group's mean scores declined. The comparison of mean scores between the WCF+R and CON+R showed that WCF+R led to more linguistically accurate writing in new writing than the CON+R.

The above findings indicate that the semi-focused direct WCF had positive effects on learners' linguistic accuracy (i.e. their use of finite verbs) over time. Overall, both content and corrective feedback led to linguistically improved original drafts and linguistically more accurate new writing. WCF + revision, however, led to greater increased accuracy in both revised texts and new texts than did content comments + revision. In other words, in terms of linguistic accuracy in new writing, the students benefited more from linguistic feedback than content comments. In addition, peer discussion plus WCF led to accuracy improvement in subsequent writing over time. However, greater improvement was evident in the WCF + revision group than in the WCF + peer discussion group. There was, however, no clear advantage in allowing students to keep their previously corrected text writing when writing a new text.

### **8.2.3. The Effect of Different Feedback Conditions on Writing Fluency**

RQ 7 concerned the effect that feedback (WCF or content feedback) had on the learners' writing fluency in their revised texts and in new writing (RQ7). I examined this because Truscott (1996) claimed that WCF has a negative effect on writing fluency. Writing



fluency was measured in terms of the number of words produced by each learner in each text. The main findings were:

- 1) Both the WCF+R and CON+R groups produced longer revised than original texts. However, the CON+R produced more words in each of the nine tasks than the WCF+R group.
- 2) In general, all the feedback groups produced longer new texts in comparison to the Control group.
- 3) The WCF+R<sup>1</sup> (i.e. with access to previous corrections) produced much longer texts than the WCF+R<sup>2</sup> (i.e. without access to previous corrections) in every task.

The above findings provide evidence that feedback (WCF or content comments) does not prevent students from writing more in both revised texts and in new writing over time. However, content feedback led to longer texts than did linguistic feedback. Furthermore, allowing students to keep corrections (WCF) of their previous writing when writing a new text also led to longer texts.

#### ***8.2.4. The Effect of Task Complexity on Linguistic Accuracy and Writing Fluency***

The complexity of the 10 tasks was evaluated by teachers' and students' ratings for task 'difficulty' and 'familiarity'. The findings of Research Question 8 are as follows:

- 1) Both the students' and teachers' ratings of tasks differed. Using the teachers' ratings, the mean accuracy scores for 'difficult/unfamiliar' tasks were slightly higher than those for 'easy/familiar' tasks in all the groups. Using the students' ratings, all the groups were more linguistically accurate in 'easy/familiar' tasks than in 'difficult/unfamiliar' tasks.
- 2) Using the teachers' ratings, both the WCF groups wrote more in the difficult tasks while the CON+R, CON+D and the Control groups produced longer texts in easy tasks. According to students' ratings, all the groups wrote longer texts in the easy tasks.

These findings for the students' and teachers' ratings of tasks, varied considerably. The results showed that task complexity mediated students' linguistic accuracy regardless of the treatment. This mediating effect was quite minimal in the WCF+R group. The students produced more linguistically accurate writing in the tasks they rated as easy/ familiar than in

the difficult/ unfamiliar tasks. One explanation is that the difficult tasks prompted students to use complex structures which might have led to less accurate writing. WCF plus revision led to greater accuracy in the easy tasks than in the difficult tasks. An analysis of the written texts suggested that it was factors such as task topic, task requirements and linguistic demands that influenced the students' assessment of task complexity. The effect of task complexity on writing fluency of all treatment groups except for the control group was weak.

### 8.3. Theoretical Implications

#### 1) Truscott's claims against grammar correction

Truscott (1996) made several claims supporting his belief that grammar correction is ineffective in promoting L2 acquisition and can even be harmful (1996; 1999; 2004). He argued that writing practice alone is capable of helping students to improve their writing accuracy and that WCF does not lead to improved accuracy in new writing. Furthermore, he argued that WCF is harmful because it results in avoidance (i.e., learners write less in order to avoid making errors). In a recent interview, Truscott continued to argue that corrective feedback serves no purpose (Mohebbi, 2021). He maintained that current research pointing to the effectiveness of grammar correction is flawed (Truscott, 2021). I will discuss Truscott's claims with reference to the findings of my research.

#### 1. Writing practice alone leads to improved accuracy

The findings of the current study failed to support the claim that writing practice alone leads to accuracy improvement. In my study, while both the WCF+R and WCF+D groups improved in accuracy, the Control group that just practiced writing without any feedback declined in accuracy over time.

#### 2. WCF has no effect on grammatical accuracy in new pieces of writing

Truscott (1996) agreed that grammar correction leads to improved accuracy in revised texts but claimed that revision following WCF does not lead to more linguistically accurate new writing. I examined this claim and found that revision in combination with WCF did lead to more accurate new writing. The WCF+R group was more accurate than the Control group from Task 3 onwards with large effect sizes from Task 5 onwards. **As** the learners in this group were required to revise their previous writing following WCF before they completed a

new text, this result confirms the results of other studies that have shown that WCF + revision leads to improved accuracy in new writing (Chandler, 2003; Shintani et al., 2014).

### 3. WCF hinders writing fluency

Another point Truscott (1996) made was that WCF can have a negative effect on students writing fluency. The findings of my study do not support this claim as I found a significant increase in writing fluency in both the students' revised texts and in their new writing. In other words, feedback, whether WCF or content, did not hinder writing fluency in both revised texts and in new writing over time. Rather, it motivated students to write more.

#### (2) Gaps Truscott identified in the existing WCF research

Truscott's arguments against grammar correction were mainly based on his perception of gaps in WCF research WCF (Mohebbi, 2021; Truscott, 2021). In this section, I will discuss each of the gaps he mentioned with reference to my own study.

1. Truscott pointed to the lack of long-term studies that have investigated the effect of WCF (2021). He suggested that the strongest results (with large effect sizes) came from studies that involved only brief treatment episodes (one or two feedback sessions). He argued that studies that have reported strong effect sizes such as those by Bitchener (2008) and Bitchener and Knoch (2010) are misleading as they involved one or two-shot treatments. This gap was addressed in my study as I investigated 10 feedback sessions carried out over a period of ten weeks. The findings demonstrated that WCF led to improved accuracy over time.

2. Another limitation Truscott mentioned was that most WCF studies have focused narrowly on one grammatical structure, (e.g. Bitchener & Knoch, 2008, 2010a, 2010b; Ekiert & di Gennaro, 2019; Shintani & Ellis, 2013). In my study, I took a middle ground approach (i.e. semi-focused correction) which is more ecologically valid as it corresponds more closely to what teachers normally do. I focused on a range of local errors (word-level lexical and grammatical errors), However, I only scored errors in finite verb constructions.

3. Truscott argued that studies where WCF led to improved accuracy in revised drafts do not constitute evidence of L2 learning. My study dealt with this gap by investigating whether WCF + revision leads to improved accuracy in new writing as well as in revised texts over time and found a positive effect. This finding lends support to previous studies such as

Chandler (2003) that have demonstrated the long-term effects of indirect WCF + revision on linguistic accuracy in new writing. My study adds to this previous research by showing that direct semi-focused WCF is beneficial.

4. Truscott also mentioned that many WCF studies have little relevance to actual teaching and therefore the findings lack validity. This was addressed by ensuring the external validity of my study. The current study was conducted in intact second language classrooms where provision of corrective feedback was a common teaching practice. In other words, the methodology employed by the study was ecologically valid. The students were also familiar with the pedagogic aspects of the study (i.e., the writing tasks, feedback on their writing, and revising). There was, therefore, minimal disturbance to normal practice.

#### **8.4 The Contribution of the Study to WCF Research**

I will consider what contribution my research has made to WCF research by examining the research questions that Bitchener and Ferris (2012) suggested needed to be investigated and show how my study has addressed them.

1. “To what extent can written CF facilitate the acquisition of different L2 forms and structures?” (p.101)

Bitchener and Ferris suggested that even though there is growing evidence that WCF plays a role in the acquisition of some linguistic forms (articles, simple past tense, etc), its effects on other rule-based and more complex structures are yet unknown. My study addressed this research gap, to some extent, by examining the effect of WCF on the acquisition of finite verb constructions. I showed that WCF led to improvement in accuracy in these constructions.

2. “To what extent can accurate revisions, as a result of written CF, facilitate accuracy in the writing of new texts over time” (p.102)

Another point made by Bitchener and Ferris was the lack of studies investigating the facilitative role of WCF + revision on linguistic accuracy in new texts. According to them, the research evidence on the effects of revision was conflicting and inconclusive. I examined this and found that revision in combination with WCF led to accuracy improvement in new pieces of writing over a period of 10 weeks.

3. “How effective is unfocused written CF in treating specific types of L2 errors?” (p.103)

The authors highlighted that most WCF studies have investigated only one or two linguistic features using onse-shot feedback and called for further research. My study examined the effect of multiple provisions of semi-focused WCF (i.e., 10 shots of feedback) over time and found a steady increase in accuracy of the targeted features.

### **8.5 Other Theoretical Contributions**

This section will discuss a number of other areas in which my thesis has made a theoretical contribution to research on WCF: (1) learners’ perceptions of feedback, (2) the relative effects of corrective and content feedback on linguistic accuracy and writing fluency, (3) the relative effects of a collaborative and individual student response to the feedback, and (4) the effect of WCF in relation to the complexity of the writing task.

#### **1. Learners’ perceptions of feedback**

The findings of the study showed that students responded positively to both linguistic feedback and content comments. However, the study found that students responded more favourably to WCF than they did to content feedback. This lends support to the findings of Black and Nanni (2016) which also reported that the students placed a higher importance on linguistic feedback than content comments. My students also stated a preference for revision over peer discussion. While this may not always be the case, my study points to the importance of ascertaining students’ preferences for responding to the feedback.

#### **2. The relative effects of corrective and content feedback**

I compared the effect of groups that received either content comments (i.e. CON+R) or linguistic feedback (WCF+R) on linguistic accuracy in finite verb forms. Content comments led to linguistically more accurate and longer revised drafts. However, corrective feedback led to more accurate subsequent new writing than content feedback. This finding contrasts with the results of previous studies (Kepner, 1991; Pashazadeh, 2017; Sheppard, 1992) that found that content feedback was as affective as corrective feedback.

My study also extends the existing research by examining the effect of feedback (i.e. linguistic and content) on fluency in writing as measured by text length. I found that neither

content nor corrective feedback hindered writing fluency in revised drafts or in subsequent writing. However, content comments did lead to longer revised texts than corrective feedback. I also found that allowing students to keep their previously corrected text when writing a new text led to longer texts.

### 3. The relative effects of a collaborative and individual student response to the feedback

To ensure feedback is effective, it is necessary to introduce ways to direct learners' attention to the feedback (Lee, 2014; Sachs & Polio, 2007; Schmidt, 1990). I introduced two such ways of helping learners attend to the feedback: (1) revision (individual) and (2) peer discussion (collaboration). I found that feedback plus peer correction led to accuracy gains in subsequent writing. Previous studies that have examined the effect of collaboration found positive effects for indirect types of feedback (Kim & Emel'yanova, 2019; Storch & Wigglesworth, 2010a, 2010b). The findings of my study add to this research by showing that peer discussion following direct WCF is also an effective strategy for improving accuracy.

I also examined the comparative effect of revision and peer discussion in combination with WCF and showed that asking students to revise was more effective than asking students to discuss in pairs. In other words, individual revision seems to be a more effective way of prompting learners' to 'notice the gap' in their existing knowledge than asking them to discuss in pairs. No previous study (e.g. Chandler, 2003; Kassim & Luan, 2014; Kim & Emel'yanova, 2019; Shintani et al., 2014) has investigated this.

My study also extends the previous research by examining the effect of allowing students to keep their corrections to hand following WCF when writing a new task. The results showed that there is no long-term advantage of keeping their previous corrections where they can refer to them when writing a new text. In other words, irrespective of whether the students had access to their previous corrections when writing a new task, they improved in accuracy over time. Mere provision of feedback with opportunity to revise is sufficient to ensure the acquisition of L2 forms and structures.

### 4. The effect of WCF in relation to the complexity of the writing task

My study extends previous research by examining whether task complexity mediated the effects of the feedback. The results showed that the students were more accurate in the

tasks they rated as ‘easy’ than ‘difficult’. However, this effect was strongest when the students revised their writing following feedback. There was also evidence to indicate that difficult/ unfamiliar tasks led to more linguistically complex sentences than easy/ familiar tasks, suggesting the kind of trade-off between accuracy and complexity that Skehan (1998, 2001) has reported for oral production. No other study has investigated how task complexity mediates the effects of corrective feedback on accuracy and complexity of written language.

## 8.6 Methodological Contributions

There are a number of contributions that my study has made to the methodology of WCF research:

### 1. Longitudinal research

The study I carried out examined the effect of semi-focused WCF over a period of 14 weeks involving 10 writing tasks and 10 feedback shots. Liu and Brown (2015), in their methodological synthesis of WCF studies, pointed to the need for more longitudinal studies. This study, therefore, extends the WCF research by illustrating how a longitudinal study can be designed.

### 2. Ecological validity

In my study feedback was provided 10 times. Multiple CF treatments better reflect real classrooms where teachers provide feedback on a continuous basis and therefore have greater ecological validity. My study also answers the call for research involving a multiple treatment design as opposed to the single treatment design (Liu & Brown, 2015).

### 3. Genre of the writing tasks

I examined the effect of feedback on one specific type of expository writing (i.e. problem-solution tasks) which has not been investigated yet. The problem-solution tasks provided opportunities for students to use their own linguistic resources to solve a series of problems familiar to their lives. Other studies have used narrative tasks (Sheen, 2007), picture stories (Bitchener & Knoch, 2008) or argumentative tasks (Rahimi, 2019). There is a need to extend the genres investigated in WCF research and my study makes a step in this direction.

#### 4. Classroom-based study

I carried out this study in five intact L2 classrooms in a University in Sri Lanka. Unlike other WCF studies that were lab-based, and therefore had limited ecological validity, the current study involved an authentic L2 learning context with typical classroom procedures with which students were familiar (e.g. feedback, revision). The normal class teacher was also present when the writing tasks were administered.

#### 5. Measuring learner variables

It is also important to examine whether the impact that affective factors (e.g. motivation, perceptions) have on students' students responses to feedback (Gue'nette, 2007; Plonsky & Brown, 2015). I included questionnaires to ascertain students' responses to the writing tasks and the feedback procedures (e.g. revision and peer discussion procedures). I was able to use the information from these questionnaires to help me interpret the results (e.g. the fact that WCF + revision proved more effective than WCF+ peer discussion).

#### 6. Scope of WCF

I opted for a middle ground approach by examining the effect of direct semi-focused WCF on learners' use of finite verbs in writing. Most of the previous studies have either opted to examine the effects of a wide range of errors (Van Beuningen et al., 2012) or have been limited to a focused approach with one or two errors (Bitchener, 2008). Comprehensive WCF may be the preferred approach of many teachers but is demanding on teachers' time and can be overwhelming for students. Semi-focused teacher WCF avoids these problems and also addresses the limitations of entirely focused WCF.

#### 7. Use of techniques to induce learners' attention to feedback (e.g. revision)

Liu and Brown (2015) identified revision as an important methodological feature in WCF studies as it serves as a primary way of directing learners' attention to feedback. In my study, I compared the effects of two ways of inducing attention to the corrections (i.e. revision and peer discussion).

#### 8. Measuring task complexity



The complexity of the writing task is another important aspect that is often ignored in WCF research. In my study, I examined whether task complexity mediated the effects of WCF on the accuracy of learners' written production. I systematically administered 10 tasks that the teachers rated as 'easy/ familiar' and 'difficult/unfamiliar'. These tasks were rated again by the students for their easiness and difficulty level. I examined both the teachers' and students' own ratings but found they did not correlate. On investigating the mediating role of task complexity on the effects of WCF, I found that only the students' ratings were informative. Asking students to rate how difficult they found writing tasks can shed light on how the writing task can influence the effects of WCF.

### **8.7 Pedagogical Implications**

The type of WCF in my study was semi-focused. There is now ample research to show that highly focused and comprehensive WCF lead to improved accuracy in new writing. My study involved a middle-ground approach, which allows the teacher to address a variety of errors without overwhelming students with corrections. In my study, I showed that semi-focused WCF also leads to improved accuracy in both revised texts and subsequent texts over time. Correction in my study involved finite verb errors, prepositions, and articles as these were common in the learners' writing. Over time it would be advisable to switch to another category of errors (e.g. word order errors).

Feedback was given continuously over a period of 10 weeks (i.e. one-semester). As the study has shown, direct, WCF continued for a considerable period of time with multiple feedback sessions, is effective in developing the accuracy of finite verb construction in students' writing. Although improvement over time was not entirely linear, there was a steady improvement indicating the value in continuing to provide feedback.

Moreover, this study has also shown that students should attend to the feedback they are given (e.g., by means of revising or discussing in pairs). An important pedagogic question is what the best way is to induce attention to corrections. The results of the study showed that revision was superior to peer discussion and was also preferred by the students. It is possible, however, that peer discussion would prove more effective if students were given training in how to do it. Teachers might wish to experiment with ways of encouraging students to attend to corrections.

In my study, I examined the learners' perceptions towards feedback practices and found that the students were positive about the WCF administered in the classroom. Teachers would, therefore, benefit from investigating their students' perceptions towards WCF. If they discover them to be negative, they should think about how they could explain the benefits of receiving WCF.

### **8.8 Limitations**

Although my study has provided evidence that direct semi-focused WCF is effective, it is not without limitations. One limitation is that although the classroom teacher was present when the study was being conducted, the classroom teacher was not involved in any aspect of the study (i.e. the initial workshop, the feedback, and the scoring of the texts). This limits the ecological validity of the study because it does not reflect a real-world classroom context where activities and procedures are carried out by the classroom teacher. The students may not have responded to the writing tasks given by the researcher in the same way as they would have if they had been given by their own teacher.

Another limitation is the failure to ensure the external validity of the study. I did not check whether the teachers in the programme gave instruction directed at the target structures investigated in the study (i.e. finite verb constructions). However, I did request the teachers not to provide such instruction during the study. Also, any such instruction was likely to have been provided for all the groups and thus would not invalidate the group comparisons I carried out.

The focus of the feedback (i.e. finite verbs, prepositions and articles) differed from how improvement in grammatical accuracy was measured (i.e. only finite verbs). It would have been preferable to have ensured that the focus of the feedback and the measurement of grammatical improvement were the same. My reason for limiting the measurement of grammatical accuracy to finite verbs was logistical. Measuring the full range of features on a large number of scripts (150 original scripts and 600 revised scripts) by myself and another teacher who had agreed to be the second marker would have been burdensome and could not have been completed within the allocated time frame. I, therefore, decided to select the most frequently occurred error type when scoring data (i.e. finite verb constructions). This decision was taken after examining the student scripts in Task 1 where I found that the frequency of errors in finite verbs was much higher than that in prepositions and articles.

I used the two techniques of revision and peer discussion to induce learners' to pay attention to the feedback. The students were familiar with revising, but peer discussion was a completely new strategy for them. Ideally, I should have provided training in how to carry out peer discussion of errors but did not do so as I wanted to ensure that the amount of time allocated to responding to the feedback was the same in the revision and peer feedback groups.

Perhaps the major limitation of my study is that I did not investigate whether the students really attended to the corrections they received. For example, I could have checked whether specific errors the WCF + R and WCF + Content groups made in their original drafts were corrected in their revised texts. Similarly, I did not check whether the peer discussion group considered all the corrected errors and whether they were able to work out underlying rules. In other words, I focused exclusively on product (i.e. the effect of the WCF) and did not investigate process (i.e. how the learners processed the feedback).

Another limitation is that it was not possible to show whether and how students' prior beliefs impacted the results of the study. This is because the study only collected data on the students' perceptions about WCF after they had received feedback.

## **8.9 Future Directions**

Upon reflecting on the design and findings of my study, I would like to suggest a number of areas for future studies. First, although this study examined the students' perceptions towards the revision/ peer discussion procedures, including a think-aloud protocol when revising would have helped to examine whether learners really attended to the feedback and, if so, what internal processes occurred.

Second, in the current study, the students who carried out peer discussion following WCF did not receive any training before the study began. Therefore, another area that needs to be investigated is whether the students would benefit more when they are given training in how to carry out peer discussion of feedback. In other words, I would like to suggest that researchers investigate how to maximise the effect of peer discussion of the teachers' corrections on accuracy in subsequent writing.

Third, future research is needed to explore further the effect of task complexity on L2 learners' performance. For example, I ordered the tasks based on the teachers' ratings before the study began but found that the teachers' ratings and students' ratings did not correspond.

Even if tasks can be sequenced according to complexity prior to starting the research, it would be advisable to collect learners' own ratings of task complexity.

### **8.10 Final comments**

This thesis has shown that semi-focused WCF can have a positive effect on learners' linguistic accuracy and writing fluency. The research contributes to (1) WCF research and (2) the teaching of writing in my Sri Lankan teaching context in different ways. That is, the findings are of significance for both L2 teachers and SLA researchers. As for SLA researchers, this study extends on-going WCF research by showing: (i) the language learning effect of direct semi-focused correction on the accuracy of finite verb constructions; (ii) the longitudinal effect of revision + WCF on accuracy improvement in new pieces of writing across ten problem-solution tasks; and (iii) the effect of multiple shots of semi-focused feedback on linguistic accuracy and writing fluency over a period of 10 weeks.

As for L2 teachers of writing in Sri Lankan context, the study demonstrated that: (i) a middle ground approach to correction (i.e. semi-focused) is well-suited to address a variety of errors over time without overwhelming students and teachers; (ii) multiple provision of feedback over a continuous period of time (i.e. one semester) is effective in improving the accuracy of finite verb constructions in students' writing; (iii) learner engagement with feedback (i.e. by means of revision or peer discussion) helps to make feedback effective; and (iv) learners' perceptions towards feedback may also have an impact on the feedback uptake. This thesis is, therefore, an attempt to address the issues encountered by L2 teachers when providing feedback in Sri Lankan universities and elsewhere. It also shows the need for a constant and systematic feedback approach to maximize the benefits of feedback. Empowered by the results of this study, I hope to implement necessary changes in the writing program of my current university and disseminate the findings of my study across other universities in Sri Lanka.

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## **Appendix A: Participant information sheets**

### *A (i): Participant information sheet (For teachers)*

#### **PARTICIPANT INFORMATION STATEMENT (For teachers)**

**HREC Project Number:** HRE2018-0580

**Project Title:** The Efficacy of Written Corrective Feedback on Linguistic Accuracy

**Chief Investigator:** Professor Rod Ellis

**Student researcher:** Waruni Iresha Ekanayaka

**Version Number:** 1.2.3.4

**Version Date:** 16/July/2018

#### **Who is doing the research?**

My name is Waruni Iresha Ekanayaka. I am a PhD student from the School of Education in Curtin University, Perth, Australia. I am conducting this research project as a part of my doctoral degree, under the supervision of Professor Rod Ellis. The project is half-funded by a grant from the National Center for Advanced Studies in Humanities and Social Sciences, Sri Lanka.

#### **What is the project about?**

The research project addresses one of the issues faced by many second language learners of English, that is, making language errors in writing. I'm trying to find out a systematic approach to correcting errors in English writing. The results will be useful for language learners, teachers and researchers in the field of second language acquisition.

#### **Why are you invited and what will you need to do?**

You are invited to participate in the study because you are involved in teaching English in the Compulsory English Programme in the University of Sri Jayewardenepura.

You will participate in the study during normal English class hours from 8a.m. -10a.m. every Tuesday or Thursday for 04 weeks. If you agree to take part in the research project, you will be given instruction on how the study involving the students in your class will be conducted.

Students will first complete a background questionnaire and a self-assessment form (10 minutes). Then, I will deliver a lesson on how to complete the 30-minute writing task. The writing tasks are similar to the task-based writing activities students do in the English programme. Each student will write one task each week lasting 10 minutes for 10 weeks. Then some groups will receive feedback on their writing immediately and will revise or discuss their writing. This will take 7-10 minutes each week. Some groups will receive feedback after completing all the writing tasks. The feedback will be given by two researchers.

In week 04, students will be asked to respond to an exit questionnaire. It will take another 5-7 minutes. The purpose of this is to identify students' perceptions about the writing and feedback process they have been through.

You will be present throughout the whole process but you will only be asked to monitor the students during the process of writing, revising/ discussion. You will be given a separate instruction sheet explaining how each stage should be monitored.

### **Benefits: What is in it for you?**

First, students in your class will have an opportunity to practise their writing. They will also receive feedback on their writing. I will read their writing and provide comments on either language errors or content and organisation problems. I believe the feedback the students receive will be helpful in improving their writing skills.

This study will provide professional learning for all the teachers involved in the study in providing effective, systematic, corrective feedback. You will not be asked to correct students' writing. However, you will be able to identify whether the students have improved their writing over time.

### **Are there any risks for you in taking part?**

The students will not receive any mark for their writing and the comments will not affect their assessment grades. This will not have any effect on your relationship with the institution and the students. You will take part in the research project during regular English class hours and it will, therefore, not be an extra burden to you. Thus there is no risk or inconvenience involved in taking part in this research project.

### **What will we do to protect your privacy?**

You and your students will be anonymous in all the records. Each class is given a separate number which is different from the number given to you officially by the head of the institution at the beginning of the semester. Each class will be identified by that number and the teachers of the classes will not be revealed in any of the documents.

At the beginning of the research, the students will be given a background questionnaire with a reference number at the right hand corner of the paper. Then, they will receive a writing sheet with the same reference number. All their writing will be labeled with that number. The questionnaires, which they will get after the background questionnaire, will be coded using their reference number. In the later part of the research, only the reference number will be used and the names of the students will not be mentioned or used.

I will use the data obtained from your class as a group and not individually. All the information will be kept on the password-protected research drive at Curtin University or in locked cabinets at the Curtin University. The information collected will be kept for 7 years and then destroyed. You will not be recognised in any of the published or unpublished documents in the future. Should you need further details about the procedure, you may ask any question from me or my supervisor at any stage of the research project.

### **Will you know the findings of the research?**

If you would like to know about the research findings, you may email me after 26<sup>th</sup> February 2022. Then, I will send a summary of your results to you.

### **Do you have to take part in the project?**

Your participation is entirely voluntary. It is your choice to take part or not. Your students will also be given an information sheet translated in Sinhalese to read and understand the nature of the study.

If you choose to participate in the study, you will be asked to sign the consent form and take part in the study. However, you can withdraw from the study at any time. Before you decide to take part in the study, you have every right to discuss it with the students in your class. If you feel that your students do not wish to participate in the study, you can inform me about

your decision. You do not have to explain why you or your students do not want to continue. If this happens, I will select another class to do my research. Your decision will not have any effect on your career or your relationship with me, colleagues or the institution.

**What is next and who can you contact?**

If you are happy to take part in the research, please fill out the **Consent form** and return it directly to me. Please take your time and ask any questions you have before you decide what to do. You will be given a copy of this information and the consent form to keep.

I am Waruni Iresha Ekanayaka and you can contact me or my supervisors to ask any questions you have while the study is being done or after the study. If you have any concerns regarding the study, you can contact me or your class teacher or the head of the Department of English Language Teaching.

Ms. Waruni Ekanayaka

Email: [wauni.ekanayaka@postgrad.curtin.edu.au](mailto:wauni.ekanayaka@postgrad.curtin.edu.au)

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Dr. Toni Dobinson (Co-supervisor)

Email: [t.dobinson@curtin.edu.au](mailto:t.dobinson@curtin.edu.au)

Curtin University Human Research Ethics Committee (HREC) has approved this study (HREC number - HRE2018-0580). Should you wish to discuss the study with someone not directly involved, in particular, any matters concerning the conduct of the study or your rights as a participant, or you wish to make a confidential complaint, you may contact the Ethics Officer on (08) 9266 9223 or the Manager, Research Integrity on (08) 9266 7093 or email [hrec@curtin.edu.au](mailto:hrec@curtin.edu.au).

*A(ii): Participant information sheet (For students of the experimental groups)*

**PARTICIPANT INFORMATION STATEMENT (For students)**

**HREC Project Number:** HRE2018-0580

**Project Title:** The Efficacy of Written Corrective Feedback on Linguistic Accuracy

**Chief Investigator:** Professor Rod Ellis

**Student researcher:** Waruni Iresha Ekanayaka

**Version Number:** 1.2

**Version Date:** 16/July/2018

**Who is doing the research?**

My name is Waruni Iresha Ekanayaka. I am a PhD student from the School of Education in Curtin University, Perth, Australia. I am conducting this research project as a part of my doctoral degree, under the supervision of Professor Rod Ellis. The project is half-funded by a grant from the AHEAD and the University of Sri Jayewardenepura, Sri Lanka.

**What is the project about?**

The research project addresses one of the issues faced by many second language learners of English, that is, making language errors in writing. I'm trying to find out a systematic approach to correcting errors in English writing. The results will be useful for language learners, teachers and researchers in the field of second language acquisition.

**Why are you invited and what will you need to do?**

You are invited to participate in the study because you are a first year student attending the Compulsory English Programme in the University of Sri Jayewardenepura.

You will participate in the study during normal English class hours from 8a.m. -10 a.m. If you agree to take part in the research project, you will first complete a background questionnaire and a self-assessment form (10 minutes). Then, I will conduct a training in how to write a writing task which will take about 30 minutes. The writing tasks are similar to the task based writing activities students do in the English programme. Then, you will write one task each week lasting 10 minutes for 10 weeks. Each task will follow two questions. Then you will receive feedback on your writing each week and will revise or discuss your writing. This will take 7-10 minutes each week.

In the last week, you will be asked to respond to an exit questionnaire. It will take another 5-7 minutes. The purpose of this is to identify your perceptions about the whole process.

Your class teacher will be present throughout the whole process.

### **Benefits: What's in it for you?**

First, you will learn to practise your writing. You will then, receive feedback on your writing. I will carefully read your writing and provide comments on either language errors or content and organisation problems. After receiving feedback on your writing, you will have the opportunity to revise or discuss it. I believe the feedback you receive will be helpful in improving your writing skills.

The errors you make in your writing will also be calculated to identify whether you have improved your writing over time. Therefore, I think this study will be a very good writing exercise for you to self-assess the improvement of your writing at the end of the semester.

### **Are there any risks for taking part?**

You will not receive any mark for your writing and the comments will not affect your assessment grades. You will have to take part in the research project during normal English class hours and it will, therefore, not be an extra burden to you. Thus there is no risk or inconvenience involved in taking part in this research project.

### **What will we do to protect your privacy?**

At the beginning of the research, you will be given a background questionnaire with a reference number at the right-hand corner of the paper. Then, you will receive a writing sheet with the same reference number. All your writings will be labelled with that number. The questionnaires which you will get after the background questionnaire, will be coded using your reference number. In the later part of the research, only the reference number will be used and your name will not be mentioned or used. You will be anonymous in all the records.

I will use the data obtained from your class as a group and not individually. Only my supervisor and I will be able to match the record with your name if required. All the information will be kept in password-protected hard drives or locked cabinets at the Curtin University. The information collected will be kept for 7 years in Curtin University and then



destroyed. You will not be recognised in any of the published or unpublished documents in the future. Should you need further details about the procedure, you may ask any question from me or my supervisor at any stage of the research project.

### **Will you know the results of the research?**

If you would like to know about the research findings, you may email me after 26<sup>th</sup> February 2022. Then, I will send a summary of your results to you.

### **Do you have to take part in the project?**

Your participation is entirely voluntary. It is your choice to take part or not. If you choose to participate in the study, you will be asked to sign the consent form and take part in the study. If you change your mind and don't want to take part in the study, you can tell me. You don't have to explain why you don't want to continue it. However, the research project is part of the normal class work in your university. Therefore, you will have to complete the writing tasks. But if you do not want to participate in the project I will not keep a record of your writing tasks.

Your decision and the writing you do and the corrections you receive will not have any effect on your grades or your relationship with your class teacher, colleagues or the institution.

### **What's next and who to contact?**

If you are happy to take part in the research, please fill out the **Consent form** and return it to your teacher or directly to me. Please take your time and ask any questions you have before you decide what to do. You will be given a copy of this information and the consent form to keep.

I am Waruni Iresha Ekanayaka and you can contact me or my supervisor to ask any question you have while the study is being done or after the study. If you have any concerns regarding the study, you can contact me or your class teacher or the head of the Department of English Language Teaching.

Waruni Ekanayaka

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Curtin University Human Research Ethics Committee (HREC) has approved this study (HREC number - HRE2018-0580). Should you wish to discuss the study with someone not directly involved, in particular, any matters concerning the conduct of the study or your rights as a participant, or you wish to make a confidential complaint, you may contact the Ethics Officer on (08) 9266 9223 or the Manager, Research Integrity on (08) 9266 7093 or email [hrec@curtin.edu.au](mailto:hrec@curtin.edu.au).

***A(iii): Participant information sheet (For students of the Control groups)***

**HREC Project Number:** HRE2018-0580

**Project Title:** The Efficacy of Written Corrective Feedback on Linguistic Accuracy

**Chief Investigator:** Professor Rod Ellis

**Student researcher:** Waruni Iresha Ekanayaka

**Version Number:** 1.2

**Version Date:** 16/July/2018

**Who is doing the research?**

My name is Waruni Iresha Ekanayaka. I am a PhD student from the School of Education in Curtin University, Perth, Australia. I am conducting this research project as a part of my doctoral degree, under the supervision of Professor Rod Ellis. The project is half-funded by a grant from the AHEAD and the University of Sri Jayewardenepura, Sri Lanka.

**What is the project about?**

The research project addresses one of the issues faced by many second language learners of English that is, making language errors in writing. I'm trying to find out a systematic approach to correcting errors in English writing. The results will be useful for language learners, teachers and researchers in the field of second language acquisition.

**Why are you invited and what will you need to do?**

You are invited to participate in the study because you are a first year student attending the Compulsory English Programme in the University of Sri Jayewardenepura.

You will participate in the study during normal English class hours from 8a.m. -10a.m. every Tuesday or Thursday. If you agree to take part in the research project, you will first complete a background questionnaire and a self-assessment form (10 minutes). Then, I will conduct a training in how to write a writing task which will take about 30 minutes. The writing tasks are similar to the task based writing activities students do in the English programme. Then, you will write one task each week lasting 10 minutes for 10 weeks.

Your class teacher will be present throughout the whole process.

**Benefits: What's in it for you?**

First, you will learn to practice your writing after the weekly completion of 10 minute writing tasks. Each writing task will be given a grade. After you complete all the writing tasks, I will carefully read them and provide grammatical feedback on them. I believe the feedback you receive will be helpful in improving your writing skills. The errors you make in your writing will also be calculated to identify whether you have improved your writing over time.

Therefore, I think this study will be a very good writing exercise for you to self-assess the improvement of your writing at the end of the semester.

**Are there any risks for taking part?**

You will not receive any mark for your writing and the comments will not affect your assessment grades. You will have to take part in the research project during normal English class hours and it will, therefore, not be an extra burden to you. Thus, there is no risk or inconvenience involved in taking part in this research project.

**What will we do to protect your privacy?**

At the beginning of the research, you will be given a background questionnaire with a reference number at the right hand corner of the paper. Then, you will receive a writing sheet with the same reference number. All your writings will be labelled with that number. The questionnaires which you will get after the background questionnaire, will be coded using your reference number. In the later part of the research, only the reference number will be used and your name will not be mentioned or used. You will be anonymous in all the records.

I will use the data obtained from your class as a group and not individually. Only my supervisor and I will be able to match the record with your name if required. All the information will be kept in password-protected hard drives or locked cabinets at the Curtin University. The information collected will be kept for 7 years in Curtin University and then destroyed. You will not be recognised in any of the published or unpublished documents in the future. Should you need further details about the procedure, you may ask any question from me or my supervisor at any stage of the research project.

### **Will you know the results of the research?**

If you would like to know about the research findings, you may email me after 26<sup>th</sup> February 2022. Then, I will send a summary of your results to you.

### **Do you have to take part in the project?**

Your participation is entirely voluntary. It is your choice to take part or not. If you choose to participate in the study, you will be asked to sign the consent form and take part in the study. If you change your mind and don't want to take part in the study, you can tell me. You don't have to explain why you don't want to continue it. However, the research project is part of the normal class work in your university. Therefore, you will have to complete the writing tasks. But if you do not want to participate in the project I will not keep a record of your writing tasks.

Your decision and the writing you do and the corrections you receive will not have any effect on your grades or your relationship with your class teacher, colleagues or the institution.

### **What's next and who to contact?**

If you are happy to take part in the research, please fill out the **Consent form** and return it to your teacher or directly to me. Please take your time and ask any questions you have before you decide what to do. You will be given a copy of this information and the consent form to keep.

I am Waruni Iresha Ekanayaka and you can contact me or my supervisor to ask any question you have while the study is being done or after the study. If you have any concerns regarding the study, you can contact me or your class teacher or the head of the Department of English Language Teaching.

Ms. Waruni Ekanayaka

Email: wauni.ekanayaka@postgrad.curtin.edu.au

Professor Rod Ellis (Main Supervisor)

Email: [rod.ellis@curtin.edu.au](mailto:rod.ellis@curtin.edu.au)

Dr.Toni Dobinson (Co-supervisor)

Email: [t.dobinson@curtin.edu.au](mailto:t.dobinson@curtin.edu.au)

Curtin University Human Research Ethics Committee (HREC) has approved this study (HREC number - HRE2018-0580). Should you wish to discuss the study with someone not directly involved, in particular, any matters concerning the conduct of the study or your rights as a participant, or you wish to make a confidential complaint, you may contact the Ethics Officer on (08) 9266 9223 or the Manager, Research Integrity on (08) 9266 7093 or email [hrec@curtin.edu.au](mailto:hrec@curtin.edu.au).

## Appendix B: Consent form

### *B (i): Consent form (For teachers)*

**HREC Project Number:** HRE2018-0580

**Project Title:** The Efficacy of Written Corrective Feedback on Linguistic Accuracy

**Chief Investigator:** Professor Rod Ellis

**Student researcher:** Waruni Iresha Ekanayaka

**Version Number:** 1.2

**Version Date:** 16/July/2018

- I have read the information about the research project and I understand its contents.
- I believe I understand the purpose, method, extent and possible risks of my involvement in this project.
- I have had an opportunity to ask questions and I am satisfied with the answers I have received.
- I understand that I am fully aware of the activities I am expected to do in the research project.
- I understand that I can withdraw from the research project at any time.
- I understand that I will remain anonymous in all reports about the research.
- I understand that this project has been approved by Curtin University Human Research Ethics Committee and will be carried out in line with the National Statement on Ethical Conduct in Human Research (2007).
- I understand I will receive a copy of this Information Statement and Consent Form.
- I understand that I have a right to request for a summary of the results of the research.
- I voluntarily consent to take part in this research project.

Participant Name	
Participant Signature	
Date	

Declaration by researcher: I have supplied an Information Letter and Consent Form to the participant who has signed above, and believe that they understand the purpose, extent and possible risks of their involvement in this project. (required for clinical trials; remove if not relevant e.g., online questionnaires)

Researcher Name	
Researcher Signature	
Date	

Curtin University Human Research Ethics Committee (HREC) has approved this study (HREC number XX/XXXX). Should you wish to discuss the study with someone not directly involved, in particular, any matters concerning the conduct of the study or your rights as a participant, or you wish to make a confidential complaint, you may contact the Ethics Officer on (08) 9266 9223 or the Manager, Research Integrity on (08) 9266 7093 or email [hrec@curtin.edu.au](mailto:hrec@curtin.edu.au).



**B (ii): Consent form (For students)****HREC Project Number:** HRE2018-0580**Project Title:** The Efficacy of Written Corrective Feedback on Linguistic Accuracy**Chief Investigator:** Professor Rod Ellis**Student researcher:** Waruni Iresha Ekanayaka**Version Number:** 1.2**Version Date:** 16/July/2018

- I have read in *Sinhalese* the information about the research project and I understand its contents.
- I believe I understand the purpose, method, extent and possible risks of my involvement in this project.
- I have had an opportunity to ask questions and I am satisfied with the answers I have received.
- I understand that I am fully aware of the activities I am expected to do in the research project.
- I understand that I can withdraw from the research project at any time and if I do so all copies of my written work will be destroyed.
- I understand that I will remain anonymous in all reports about the research.
- I understand that all copies of my writing will be safely stored for a maximum of seven years after which they will be destroyed.
- I understand that the writing activities I do and the corrections I receive will not have any effect on my grades or my relationship with the teacher/s and the institution.
- I understand that this project has been approved by Curtin University Human Research Ethics Committee and will be carried out in line with the National Statement on Ethical Conduct in Human Research (2007).
- I understand I will receive a copy of this Information Statement and Consent Form.

- I understand that I have a right to request for a summary of the results of the research.
- I voluntarily consent to take part in this research project.

Participant Name	
Participant Signature	
Date	

Declaration by researcher: I have supplied an Information Letter and Consent Form to the participant who has signed above, and believe that they understand the purpose, extent and possible risks of their involvement in this project. (required for clinical trials; remove if not relevant e.g., online questionnaires)

Researcher Name	
Researcher Signature	
Date	

Appendix C: Background questionnaire

Reference No:
---------------

**Background Questionnaire**

**Group A/B/C**

The purpose of this questionnaire is to gather information about your personal and educational background. Please tick the appropriate box (☑) and write your answers in the space provided. There are no “right” or “wrong” answers. Some questions may require more than one answer so please tick as many boxes as is appropriate for you.

1. Name: .....

2. Gender:  Female     Male

3. Date of Birth

4. Age:

(Date/Month/Year)

5. Contact Number:

6. Native Language:  Sinhala     Tamil

7. Subjects you studied for your A/L examination

8. The medium of instruction at your school:  Sinhala     English

Tamil

9. The language I use with your parents:  Sinhala     English   

Tamil

10. The language I mainly use with my peers:  Sinhala     English   

Tamil

11. How long have you been studying English? Write in the number of years.

.....

.....

12. Do you intend to do your academic subjects in English medium in the university?

Yes       No

13. How long have you been receiving academic instruction in English (including this year)?

Write in the number of years.

.....  
.....

14. How often do you practice writing in English?

Weekly  
 I write only when the teacher asks me to do  
 No, I don't practice writing in English  
 Yes, I often try to practice my writing

15. Do you enjoy writing?

Yes       No

16. How many hours a week do you spend on writing at home? Write in the number.

.....  
.....

17. What kind of writing have you had practice in? (essays, subject specific writing, short descriptions, diaries)

.....  
.....

18. Is there anything you would like to add?

.....  
.....

Date

.....

Thank you for your feedback.

If you need further clarifications or have any questions, please contact me via

[ireshawaruni@gmail.com](mailto:ireshawaruni@gmail.com)

## Appendix D: Self-Assessment form

### Self- Assessment Form

**A / B / C / D**

The purpose of this self-assessment form is to examine how you self-assess your language proficiency level. Please circle the select letter or fill in the appropriate box with the select number. Circle the group you belong to before you start filling the questionnaire.

1) How would you assess your English proficiency (Circle the appropriate answer in each row)

Language Skill	Advanced	Intermediate	Beginning	I have no idea
Listening	A	B	C	E

Speaking	A	B	C	E
Reading	A	B	C	E
Writing	A	B	C	E

2) How would you assess the quality of your writing? Select the appropriate number from the Table 1 and fill in the boxes against language functions below.

1	Poor
2	Fair
3	Good
4	Very Good
5	Excellent

Table 1

	<input type="checkbox"/>	Grammar	<input type="checkbox"/>
Content	<input type="checkbox"/>		<input type="checkbox"/>
Vocabulary	<input type="checkbox"/>	Organisation	<input type="checkbox"/>
Sentence Structures	<input type="checkbox"/>	Flow of writing	<input type="checkbox"/>
Complexity of sentences		Spelling	

3) How would you assess the importance of each of the following aspects of language for improving your writing? Enter a number in each box.

1	Not at all important
---	----------------------

2	Slightly important
3	Moderately important
4	Very important
5	Extremely important

Grammar

Content

Vocabulary

Organisation

Sentence Structure

Flow

Complexity of sentences

Spelling

4) What are the main language-related problems you face when you write in English?

.....

.....

.....

.....

*Thank you*





## Appendix E: Training materials

### Writing a Problem-Solution Text

#### Step 1: Read about a problem

*Kuma and Ruchini are a three-year old married couple living with Kuma's parents. The young wife constantly complains that her mother-in-law is meddling in their marriage unnecessarily. She is critical of everything Ruchini does including; how they solve their problems, how she spends her time, what she wears and where she goes. The mother-in-law is also complaining that Ruchini does not help with the household chores. This situation has created a conflict between Kuma and Ruchini. How do you think you could solve this problem?*

Ask the students if they have ever heard of people who have this problem.

#### Step 2: Identify the situation and the problem

Complete this table by writing in the part of the text that describes the situation Ruchini faces and what her problem is.

Situation	
-----------	--

Problem	
---------	--

### Step 3: Group Activity

Think of a possible solution to Ruchini's problem and then evaluate it (i.e. comment on why you think it is a good solution and any possible difficulty that may arise).

Possible solution	Your evaluation

### Step 4: Class discussion

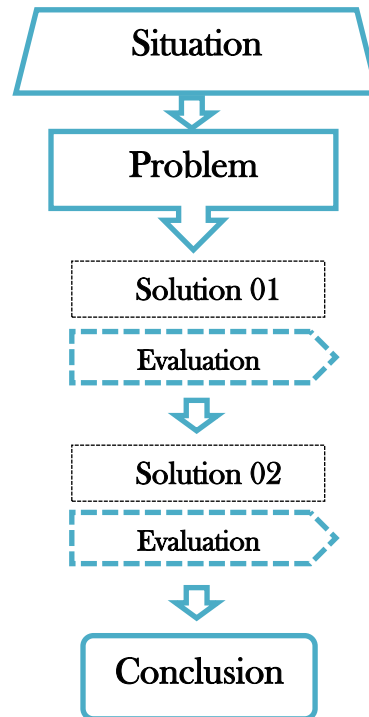
Tell your teacher the solution your group agreed on and how you evaluated it. Your teacher will write up the solutions you suggest on the whiteboard.

Which solution do you think is the best? Why?

### Step 5: Now write a paragraph

You will have ten minutes.

Your paragraph should have this structure:



**Step 6: Review your writing and correct any errors you have made.**

## **Appendix F: Problem - solution writing tasks**

### **Problem - Solution writing Tasks**

#### **Task 1**

Imanga, an undergraduate, was offered free hostel facilities in her fourth year. But her roommate, who seems to be a nice girl, invites a third roommate without asking Imanga. There is not enough space to keep the other person's belongings in their small room. The new girl always plays loud music. The fact that the room is always noisy and messy irritates Imanga.

*Imagine you are Imanga. Write a letter to the warden of the hostel explaining the situation, the problem and possible solutions you have thought of and ask for her advice.*

#### **Task 2**

Amith is married to Thilini and lives with his parents, who are old and sick. Thilini, who has a full time job along with many household chores, constantly complains about Amith's parents and asks him to send them to an old persons' home. But Amith wants to look after his aging parents until they die.

*Imagine you are Amith. Write a letter to your best friend explaining the situation, the problem and possible solutions you have thought of and ask for his/ her advice.*

#### **Task 3**

You are a third year undergraduate in the Faculty of Humanities and Social Sciences. You applied for free hostel accommodation in your university but you were rejected as the university usually doesn't provide hostel facilities for all third year students. However, you find it difficult to pay for accommodation outside the university due to some financial issues at home.

*Write a letter to the dean of the faculty explaining your situation, problem and possible solutions which you thought of and ask for his advice.*

**Task 4**

You are a fourth-year student in the University and have a part-time job as an assistant banker in People's Bank. You are required to attend a few compulsory lectures during weekdays before the final examination. However, as a probationary banker, you cannot take leave on weekdays. At the same time, If you fail to attend lectures, you will not be able to sit the final examination.

*Write a letter to your bank manager explaining the situation, problem and possible solutions you have thought of and ask for his advice.*

**Task 5**

You are in your first-year undergraduate. A group of senior students are constantly trying to rag you in the university. Their behaviour often involves abusing and humiliating you. This situation has made you feel very uncomfortable and you are not sure what to do about it.

*Write a letter to the dean of your Faculty explaining the situation, possible solutions which you think should be taken to solve this problem and ask for his advice.*

**Task 6**

Sama and Janith got married three years ago. They have three young children. They both feel that the other is not contributing to the marriage enough. Janith thinks his hard work is not appreciated while Shyama thinks she is overburdened with taking care of the children. Their initial love has now given way to constant arguments which have an adverse effect on their children.

*Imagine you are Samath. Write a letter to your mother explaining the situation, the problem and the possible solutions you can think of and ask for her advice.*

**Task 7**

You are a first year undergraduate and find the food in the main student canteen lacking taste and much-needed nutrients. The canteen doesn't cater to students with a variety of needs and tastes. As a result, students always complain about poor quality meals. They believe the

canteen managers only concern is the profits they can make. You have decided to visit nearby cafes outside of the university to have lunch and are often late for afternoon lectures.

*Write a letter to the Vice Chancellor of your University explaining the current situation, problem and possible solutions you have thought of and suggest a way forward.*

### **Task 8**

Rajanganaya is a self-sufficient and eco-friendly village. A non-government association with the support of the government has designed a commercial project to change this beautiful village into a city by establishing factories, shopping malls, apartments, parks, etc.

Environmentalists and villagers have started to protest against the proposed project.

*Write a letter to the Daily Mirror explaining the situation, the problem and any possible solutions which you think can be taken to solve the problem.*

### **Task 9**

Mali is married to Ranga and had to leave her job after the marriage. Mali now has two beautiful sons. She has recently received an offer of a teaching job and is willing to go back to work. But Ranga insists Mali to refuse the job offer. He thinks Mali will not be able to manage her responsibilities as a mother if she has to work in a fulltime job. This situation has created a conflict between Mali and Ranga.

*Imagine you are Mali. Write a letter to your mother. Describe the situation, the problem and any possible solutions that you think can be taken to solve the problem and ask for her advice.*

### **Task 10**

Nelum, who is a widow due to the untimely death of her husband, now receives her husband's army pension, which is her only income. She wants to marry again to find support for her thirteen year old daughter but she is only entitled to the pension if she stays unmarried. She fears losing her steady income.

*Write a letter to a close friend explaining the situation, the problem and any possible solutions you have thought of and ask for her advice.*

**Appendix G: Questionnaire after each Task**

Reference No.
---------------

**Questionnaire after each Task**Task 1

Ref. No.....

Group .....

Now you have completed Task 1. Please read the question and tick the appropriate box (☑)

i) Are you familiar with the topic of this task?

- Not at all familiar
- Not too Familiar
- Somewhat familiar
- Familiar
- Very familiar

ii) Did you find this writing task easy?

- Very Easily
- Easily
- Somewhat Easily
- Poorly
- Very poorly

## Appendix H: Questionnaire after each revision/ discussion

### Questionnaire after each revision/ discussion

Task 1

Ref. No.....

Group

.....

#### Revision

Now you have revised Task 1. Please read the questions and tick the appropriate box (☑)

iv) How successful was revising your writing after receiving feedback?

- |   |  |                                     |
|---|--|-------------------------------------|
| <input type="checkbox"/> Extremely successful | <input type="checkbox"/> Very successful       | <input type="checkbox"/> Successful |
| <input type="checkbox"/> Somewhat successful  | <input type="checkbox"/> Not at all successful |                                     |

#### Discussion

v) How successful was discussing comments on your writing with your partner?

- |   |  |                                     |
|---|--|-------------------------------------|
| <input type="checkbox"/> Extremely successful | <input type="checkbox"/> Very successful       | <input type="checkbox"/> Successful |
| <input type="checkbox"/> Somewhat successful  | <input type="checkbox"/> Not at all successful |                                     |
| <input type="checkbox"/>                      | <input type="checkbox"/>                       |                                     |



**Appendix I: Exit Questionnaire**

Reference No.

## Exit Questionnaire

Now you have completed a writing task/s. To what extent do you agree with the following statements? Please read the statements below and tick (✓) the appropriate choice.

**A/B/C**

1) I think I very well understood teacher's feedback on my writing.

Strongly Disagree

Disagree

Neutral

Agree

Strongly Agree

2) I think the teacher's feedback on my writing was useful

Strongly Disagree

Disagree

Neutral

Agree

Strongly Agree

3) I always paid close attention to the errors the teacher had corrected.

Strongly Disagree

Disagree

Neutral

Agree

Strongly Agree

4) I tried to work out why the teacher had corrected each error.

Strongly Disagree

Disagree

Neutral

Agree

Strongly Agree

5) I feel revising/discussing errors and comments about my writing was helpful

Strongly Disagree

Disagree

Neutral

Agree

Strongly Agree

6) I feel the whole process of writing and revising/ discussing was very helpful.

Strongly Disagree

Disagree

Neutral

Agree

Strongly Agree

Write anything else that you liked and disliked about the writing tasks and the corrections you received.

What you liked -

.....

.....

.....

.....

What you disliked

.....

.....

.....

Thank you for your feedback

## **Appendix J: Stimulated recall Questionnaires**

### **Stimulated recall Questionnaires**

#### **Group 1 (WCF+R<sup>1</sup>) – students had access to corrections**

You received feedback on your errors and had access to the corrections when revising your original drafts.

1. Did you like having access to the corrections when revising? Why?
2. Did you try to compare the corrections provided by the teacher and your errors in order to understand why and how your errors had been corrected?
3. How did you revise? Did you look at the corrections in each line and then write it out in the revised draft? Or did you just copy the corrections word by word?
4. Did you try to change/ modify the content of your original draft when revising?
5. Did you check whether you had made all the corrections after revising?
6. Did you check whether you made any other errors than the errors corrected by the teacher and, if so, did you try to correct them?
7. (First identify a few errors that he/she did not correct). Why didn't you correct these errors?

#### **Group 1 (WCF+R<sup>2</sup>) – students did not have access to corrections**

You received feedback on your errors but did not have access to the corrections when revising your original drafts.

1. When you received the corrections on your writing did you study the corrections carefully?
2. Did you try to understand why and how the error was corrected?
3. Did you find having to revise your writing useful?
4. When you were revising, could you identify the errors that you needed to correct?

5. Could you remember the corrections you had received when revising?
6. Did you try to change the content of your original draft when revising?
7. Did you check whether you had made all the corrections after finishing revising?
8. (Identify a few errors that she/he did not correct)- Why didn't you correct these errors?

**Group 2 (WCF-R) – students who discussed the linguistic feedback in pairs**

You were asked to discuss the feedback you received in pairs.

1. Did you study the corrections carefully by yourself before discussing them with your partner?
3. Did you try to understand why and how each error had been corrected?
4. Did you discuss all the corrections with your partner or just some of them? If just some of them, how did you choose which ones to discuss?
5. Did you find discussing the corrections with your partner helpful? How was it helpful? (if they answered 'yes'). Why wasn't it helpful? (if they answered 'no').
5. Did you try to recall the corrections you had received when writing a new draft?