The Cyberscript Project:

A mixed-method study of pre-service ESL teachers'

corrective feedback beliefs and practices

Daniele Guénette

Department of Integrated Studies in Education

McGill University, Montreal

August 2009

A Thesis Submitted to

McGill University in

Partial Fulfillment of the Requirements of the

Degree of Doctor of Philosophy

À Pierre, mon compagnon et mentor

Acknowledgements

It takes a village to raise a child.
African Proverb

It is the same thing when writing a thesis. To complete such a large-scale project, you need a whole village: family, friends and colleagues.

First, I would like to thank my advisor, Dr. Roy Lyster, who supported me without pressure and whose precious advice at transitional stages allowed me to clarify and to refine my work. I am indebted to the members of my committee, Dr. Janet Donin, Dr. Daphnée Simard and Dr. Carolyn Turner, who provided invaluable help through all the stages of my project. I am also grateful for funding to partially support data coding and analysis awarded to me by Dr. Lyster from his SSHRC grant No. 410-2006-2212.

I acknowledge the generosity of many people who contributed to this project: Marcia, Martine and their ESL learners, as well as the students in the Teaching English as a Second Language program, without whom there would not have been a Cyberscript Project. I also heartily thank Jose Corea and Yongchao Shi, two statisticians whom I pushed to the limits of patience, and Dina Tsoulos, who coded and transcribed for hours on end.

I am privileged to have close friends who played the roles of confident, therapist, mentor, and sounding board. There are no words that can express all of my gratitude to Jésus, for his faultless presence, and to Daphnée for her incredible generosity. And to all of my friends who, for years, continually heard me say, "I don't have time; I have to work on my thesis," thank you for remaining by my side.

Thanks to Nicolas and Marie for their love and understanding, and to Leo, my precious little one, for giving me wings.

I dedicate this thesis to my life partner, Pierre, without whom I would never have imagined undertaking this work. His unwavering faith in me gave me strength, confidence and determination.

Abstract

Prompted by the controversy regarding the effects of corrective feedback (CF) on second language (L2) acquisition, as well as the role of beliefs in teacher cognition, this mixed method study examines the CF practices of a group of pre-service ESL teachers (i.e., mentors) paired with high school learners. The primary objectives were to investigate which strategies and techniques pre-service ESL teachers use when providing CF on writing, as well as the correlation between the strategies adopted by the pre-service ESL teachers and the categories of error made by the learners. To this end, the email correspondence exchanged between the mentors and learners over a school semester was examined.

The secondary goal of this study was to investigate whether the CF practices of mentors corroborated their beliefs in this regard. To explore these issues, data in the form of questionnaires on beliefs, journals and semi-structured guided interviews were collected throughout the project to establish the congruence of mentors' actions and perceptions of their actions with their beliefs about CF, and provide a finer-grained interpretation of the quantitative data collected through the correspondence.

Descriptive and inferential statistics revealed that, similar to the findings of research on teacher feedback, the mentors, as a group, used direct corrections significantly more than other feedback strategies and that this correction pattern was constant irrespective of the error categories. However, great variability in the mentors' decision-making process regarding CF, as well as discrepancies between expressed beliefs and practices, were also apparent. Consistent with research on teacher cognition, this study revealed tensions resulting from a clash between theory and practice, and

showed that an awareness of beliefs does not necessarily have an impact on CF practices, especially when beliefs cannot be reconciled with the pedagogical imperatives of the classroom. The study discusses the myriad of factors that influence the teachers' CF practices, and concludes with implications for future research and suggestions for second language L2 teacher training programs.

Résumé

Inspirée par la controverse sur les effets de la rétroaction corrective sur l'acquisition de la langue seconde, ainsi que le rôle des croyances dans le développement de la cognition des enseignants, cette étude fondée sur des méthodes mixtes examine les pratiques de rétroaction corrective de futurs enseignants d'anglais langue seconde (i.e., les mentors), jumelés avec des élèves du secondaire. L'objectif principal était de recenser les stratégies et techniques de rétroaction corrective à l'écrit utilisées par les futurs enseignants, et d'établir une corrélation entre ces stratégies et les catégories d'erreurs commises par les apprenants. Dans ce but, la correspondance par courriel échangée par les mentors et les apprenants durant tout un trimestre a été analysée.

Le second objectif était d'examiner dans quelle mesure les pratiques de rétroaction corrective des mentors correspondaient à leurs croyances à cet égard. Afin d'obtenir une interprétation plus poussée des résultats des analyses quantitatives, des données qualitatives ont été recueillies (questionnaires sur les croyances, journaux de bord, entrevues semi-dirigées), afin de mesurer la congruence des pratiques des mentors et leurs perceptions de ces pratiques, en lien avec leurs croyances au sujet de la rétroaction corrective.

Des statistiques descriptives et inférentielles ont révélé une prépondérance significative de corrections directes de la part de tous les mentors, ainsi qu'une constance dans ces pratiques, indépendamment des catégories d'erreurs commises par les apprenants. Par contre, les analyses ont également mis au jour une grande variance dans le processus de prise de décision des mentors, ainsi que des contradictions entre leurs pratiques et les croyances exprimées. Conformément aux résultats des recherches en

cognition des enseignants, cette étude a révélé des tensions qui proviennent d'un écart entre la théorie et la pratique, et a démontré que la conscience des croyances n'a pas nécessairement de répercussion sur les pratiques, particulièrement lorsque ces croyances sont en contradiction avec les impératifs pédagogiques de la classe de langue seconde. Cette étude illustre les nombreux facteurs qui influent sur les pratiques de rétroaction corrective des enseignants et, en conclusion, propose des avenues pour la recherche future et pour la formation des enseignants de langue seconde.

TABLE OF CONTENTS

List of Tables

Tables in Text

Tables in Appendix A

Tables in Appendix H

List of Figures

Figures in text

CHAPTER 1

INTRODUCTION

1.1   Rationale for the Study

Over the last 25 years, the issue of corrective feedback (CF) on writing has generated a passionate debate fuelled by the conflicting results of descriptive and experimental studies that investigated the effectiveness of various CF strategies and techniques to improve learners' fluency and accuracy in their second language (L2). Some believe that error correction on writing is totally ineffective and should be abandoned (Truscott, 1996, 1999, 2004). Others argue that, even though error correction has not proven to be effective in the long term, some studies have shown that it can be helpful and therefore teachers should continue to provide it to their learners (Chandler, 2004; Ferris, 1999, 2004). Over and above these theoretical considerations, the needs of the learners and the professional obligations of teachers must be considered. As some studies have shown, teachers believe it is their responsibility to provide CF, and learners expect feedback from their teachers and generally feel that it helps them (Hedgcock & Lefkowitz, 1994; Hyland & Hyland, 2001; Schulz, 1996, 2001).

Research to date in CF on writing has been mostly preoccupied with investigating the relative merits of various feedback strategies and techniques. Many studies have compared feedback on content with feedback on form (Ashwell, 2000; Fathman & Whalley, 1990; Fazio, 2001; Goring-Kepner, 1991; Sheppard, 1992) while others have investigated feedback on form only (Chandler, 2003; Ferris & Roberts, 2001; Lalande 1982; Robb, Ross, & Shortreed, 1986), comparing the effects of *direct corrections*,

providing the correct form, and *indirect corrections*, indicating that an error has been made without providing the correct form. Various techniques for providing indirect corrections have also been compared, and more recently, different direct correction options have been examined (Bitchener, 2008; Bitchener, Young & Cameron, 2005; Sachs & Polio, 2007).

Nowadays, however, as can be observed from recent studies, the controversy is no longer about whether or not to correct learners' errors, but rather about what type of correction is most useful. Earlier studies seemed to favour the provision of indirect feedback because it involves learners in cognitive problem solving, an activity hypothesized to lead to acquisition (Aljaafreh & Lantolf, 1994; Gass & Selinker, 2001; Tocally-Beller & Swain, 2005); more recent studies, however, suggest that direct feedback can also be effective, especially with lower proficiency learners (Bitchener, 2008; Sachs & Polio, 2007).

Although the results are contradictory, research on CF on writing informs L2 teachers concerning what they should be doing regarding error correction. However, very little is known about which CF practices L2 teachers adopt in the classroom, or what factors determine their error correction behaviour.

We would be tempted to assume that when they enter the profession teachers will adopt pedagogical practices that reflect what they have been exposed to and what they have learned during their 4-year teacher training program. We would therefore expect *English as a second language* (ESL) teachers to apply what they know about CF and its role in the L2 acquisition process in their L2 classroom. Particularly in the province of Québec, we would also expect ESL teachers to follow the guidelines provided in the *Ministère de l'Éducation, du Loisir et du Sport* (MELS) curriculum and use oral CF moves

such as "elicitation, requests for clarification, metalinguistic retroaction and repetition"[1] (MELS, 2004, p. 188), that do not imply the provision of the correct form, and bring their learners to focus on the form and structure of the language by providing feedback in the shape of "comments, information or questions relative to the correct formulation of what the students say or write" (MELS, 2004, p. 188).

But research on teacher cognition tells us otherwise. It appears that teachers' beliefs probably have as much, if not more, of an impact on teachers' practices in the classroom, than what they have been exposed to during their professional teacher training. As some studies have shown (Basturkmen, Loewen & Ellis, 2004; Richards, Gallo & Renandya, 2001) the most important core belief of language teachers centers around the role of grammar and error correction. Consequently, if teachers' beliefs shape their classroom practices as seems to be the general consensus in education studies, then this core belief, more than anything else, will dictate the error correction practices pre-service ESL teachers will adopt in the classroom.

Any teacher – but, I would advance, especially new teachers – probably hesitates between two possible reactions to their students' errors in the L2. They believe, because they have been taught so or simply because they have first-hand experience, that making errors is a perfectly normal phenomenon in the L2 acquisition process. On the other hand, they also believe that not correcting linguistic errors might lead to fossilization, or at least stabilisation (Long, 2003) of the incorrect forms in their learners' output. As pointed out by Calvé (1992), both positions are defendable and the issue for teachers is not about whether or not to correct, but rather what to correct, when to correct and how to

---

[1] The categories, and explanations of the categories in a footnote at the bottom of page 188 in the MELS program, are taken from Lyster and Ranta, 1997.

correct. However, pre-service teachers are not explicitly taught the what, when and how of error correction, and even if they were, research tells us that they would not necessarily apply these "corrective feedback recipes," especially if they are in contradiction with their beliefs.

In the L2 classroom where the objective is for learners to develop their ability to speak and write accurately (Larsen-Freeman, 2003), grammar is considered an essential component of L2 instruction and CF often becomes the "predominant method of grammar instruction" (Frodesen & Holten, 2003, p. 152). As soon as ESL teachers enter the profession, they will be faced with the task of providing feedback to their learners and they will need to make a decision on how to do so. Will they let their beliefs dictate this decision? Will they apply the prescriptions of the MELS curriculum that advocates the use of indirect CF techniques? Will they experiment with different ways of providing CF and adapt their strategies to the needs of the learners, as recommended in published research?

These are the questions that led to the present study.

1.2   Purpose of the Study

As will be discussed in depth in the next chapter, the bulk of research on written CF has been concerned with investigating the differential effect of various strategies and techniques teachers can use to provide CF to their learners. Feedback strategies employed by teachers in their writing classes have been examined, as the preference of students and teachers for different types of feedback (e.g., Conrad & Goldstein, 1999; Enginarlar, 1993; Ferris, 1995, 1997; Hyland, 2003; Hyland & Hyland, 2001, Leki, 1991; Radecki & Swales, 1988; Schulz, 1996, 2001). Most of this research, however, has been conducted in tertiary education settings, in the context of composition classes designed to

help college or university-level students master the intricacies of disciplinary academic writing. But very little research exists on the type of CF provided by ESL teachers in regular language classrooms where the focus is on acquiring and mastering the L2.   The oral CF literature is much more informative in that respect. Lyster and Ranta's (1997) observational study of French immersion teachers provided a typology of the various oral feedback moves employed by teachers when interacting orally with their learners. But no such typology exists for the written CF practices of teachers in similar contexts (i.e. L2 classrooms with elementary or secondary school learners).

In the field of L2 teacher education, teachers' beliefs and how they influence the instructional practices and decisions of teachers have been examined (Borg, 2003a, 2003b; Fang, 1996; Golombek, 1998; Johnson, 1992a, 1992b).   Beliefs regarding grammar teaching and error correction and actual practices of teaching grammar also inspired many studies and articles (e.g., Borg, 1998, 1999, 2001; Farrell & Lim, 2005; Schulz, 1996, 2001).   Some studies investigated teachers' beliefs about focus on form[2] and their actual practices during lessons (e.g., Basturkmen, Loewen and Ellis 2004; Farrell & Lim, 2005; Mackey, Polio and McDonough, 2004).

Pajares (1992) noted that research into the beliefs of pre-service language teachers was really scarce, but sorely needed, because research findings indicate that beliefs will affect the outcome of a teacher education program, and consequently teachers' error correction behaviour when they enter the profession. Following this injunction, many studies that will be reviewed in the next chapter were conducted to

---

[2] Focus on form instruction is defined as "any pedagogical effort which is used to draw the learners' attention to language form either implicitly or explicitly" (Spada, 1997, p. 73).

investigate pre-service ESL teachers' belief systems and their influence on various aspects of classroom instruction.

As will be seen in detail in Chapter 3, research to date on the cognition of language teachers has shown the impact of beliefs on practices and the primacy of beliefs over theoretical training, while research on CF on form has not provided unequivocal answers to teachers in terms of which type of CF is most effective. In that context, as a teacher trainer and former ESL teacher, I am preoccupied with how teachers acquire an understanding of their profession and develop their pedagogical practices. I am also particularly interested in how they approach error correction especially since CF is advocated by the Québec Education Program as the principal activity by which teachers should bring their learners to focus on the form of the language.

With its focus and design, this study attempts to fill several gaps in research on teacher cognition and CF on writing. First, it is conducted in a regular secondary classroom environment with adolescent learners for whom ESL instruction is a required course, not a choice, an instructional context that has been largely ignored in previous studies. Second, whereas most of the research to date has examined the relative merits of different feedback types, this study focuses on examining how pre-service teachers respond to learner errors and what dictates their error correction behaviour. Third, this study addresses Borg's (2003) call for examining teachers' beliefs as they relate to different aspects of language teaching by focusing specifically on feedback on error, a core pedagogical practice of language teachers.

1.3   Research Questions

This mixed methods study attempts to provide a picture of the CF practices of pre-service ESL teachers through an investigation of the error correction techniques they employ with regular ESL learners at the high school level, for the duration of a semester. An embedded mixed method correlational design (Creswell & Plano Clark, 2007) will be used in which qualitative data will be collected in order to substantiate and explain results obtained from quantitative data collected during the semester. As stated above, the primary goal of the study is to answer the following questions:

1. What strategies and techniques do pre-service ESL teachers use when providing CF on writing?

2. Is there a correlation between the CF strategies adopted by the pre-service ESL teachers and the categories of error made by the learners?

A secondary purpose is to establish whether the CF practices of pre-service ESL teachers are corroborated by their beliefs. The qualitative data collected before, during and after the study, will make it possible to answer the following secondary questions:

3. To what extent are pre-service ESL teachers' beliefs about error correction congruent with their error correction practices?

4. Did pre-service ESL teachers' beliefs change as a result of having provided CF to learners over a high school semester?

The specific objectives that make it possible to answer the above mentioned questions are:

a. To identify the types of error correction strategies employed by pre-service ESL teachers.

b. To examine the correlation between the types of errors made by the learners and the corrections provided by the pre-service teachers.

c. To explore pre-service teachers' beliefs about error correction through the use of questionnaires, journal entries and interviews.

d. To examine the relationship between pre-service teachers' beliefs about grammar error correction and their practices.

e. To examine teachers' beliefs before and after the project and measure the changes.

1.4 Overview of the Thesis

This thesis is divided into seven chapters. The present chapter (Chapter 1) introduced the rationale for the study, the purpose of the study and the research questions.

Chapter 2 will introduce the two theoretical propositions underlying this research: the role of CF in L2 acquisition and its implications for the L2 classroom, and the impact of teachers' beliefs on their practices. It will start with a definition of CF and of the various strategies and techniques employed in providing feedback on writing. A review of the pertinent literature related to these two concepts will follow in Chapter 3. The first section will be devoted to a review of the research on CF in writing. Then, empirical studies that have compared two different feedback strategies (feedback on form and feedback on content), along with studies that have focused specifically on examining the efficacy of different error feedback techniques will be presented. Research on teacher cognition that specifically addresses the relationship between what teachers do in the classroom, and what they "think, know and believe" (Borg, 2003) will be the focus of the second section of Chapter 3. The notion of teacher cognition will be defined, and the most relevant studies investigating beginning or pre-service teachers' beliefs will be

reviewed, as well as the group of studies that have investigated beginning and experienced teachers' CF practices in relation to their beliefs. Chapter 3 will conclude with a review of recent research on teacher feedback.

Chapter 4 will focus on the methodology of this study. The first sections will present the mixed method research (MMR) design of the study, the context in which it was conducted, the profile of the participants and the description of the instruments. Then, the data collection procedures, the data organization, the coding protocols for all the instruments, and the procedures for data analysis will be detailed. Chapter 4 will close with a timeline illustrating the various steps of the study. The analyses and results of the data collected through the various instruments will be the focus of Chapter 5. The first sections will present the results of the quantitative data, while the following sections will introduce the qualitative results.

Findings will be discussed in Chapter 6 and interpreted in relation to the results of teacher feedback and teacher cognition studies presented in Chapter 3. Limitations of the study and directions for future research will also be discussed. Finally, the conclusion will be presented in Chapter 7.

CHAPTER 2

THEORETICAL FRAMEWORK:

CORRECTIVE FEEDBACK AND TEACHER COGNITION

This chapter reviews the two theoretical propositions underlying this research: the first concerns the role of CF in L2 learning, while the second examines the notion of beliefs and their impact on teachers' developing cognition and practices.

A definition of CF and of the various error correction strategies and techniques used for providing written feedback to L2 learners will be presented, followed by a review of the theoretical arguments in favor of a role for corrective feedback in L2 acquisition, especially its implications for the L2 classroom. The second part of this chapter will focus on a general discussion of the concepts of beliefs and knowledge as they relate to the way teachers develop their pedagogical practices.

2.1   Corrective Feedback

2.1.1   Definition of Corrective Feedback on Writing

CF, also referred to in the literature as negative evidence or negative feedback, is an "indication to a learner that his or her use of the target language is incorrect" (Lightbown & Spada, 2006, p. 197). In writing, CF on form is also referred to as grammar correction or error correction and is concerned with sentence-level errors (punctuation, lexical choice, morphology, syntax), in other words, any incorrect grammatical use of the target language. It is to be distinguished from feedback on content which refers to any comment, suggestion, question, request for clarification, elaboration

or information made by the teacher that pertains to the ideas, organization, style and rhetorical structure of the text (Hyland & Hyland, 2006).

CF strategies are characterized differently whether they address oral or written production. In their observation study of French immersion teachers, Lyster and Ranta (1997) identified the following oral feedback types: explicit correction, recast, clarification request, metalinguistic feedback, elicitation, and repetition. Explicit corrections imply the provision of the correct form accompanied by a clear indication that what the student said was wrong: 'You must say went, not goed'. Quite often, teachers will provide the correct form but do it in such a way as not to interrupt the flow of communication by using recasts, "a reformulation of all or part of a student's utterance, minus the error" (p. 46). Recasts are considered to be implicit because they do not state clearly and directly that the utterance was wrong. The last four corrective feedback types identified by Lyster and Ranta are referred to as "prompts." By indicating that an error has been made, through verbal or non-verbal signals of incomprehension, but by withholding the correct form, prompts "push" learners to correct their own output which is claimed to favour L2 acquisition (Swain, 1985).

Although CF on writing shares the same objective as oral CF, namely, pushing the writer to pay attention to the form and not just the meaning, it differs because of the medium. For example, in writing, the notion of implicit recast as described above does not really exist because as soon as a word or expression is rewritten by the teacher, it becomes a clear indication to the student that there is something wrong with the original utterance. Learners cannot mistake it for a simple repetition of what they said, which is often the case in oral interactions (Lyster & Ranta, 1997).

In the field of L2 writing, experimental studies of written corrective feedback on form have investigated the merits of two different strategies. The CF strategy whereby teachers actually provide the correct form or structure is referred to as the *direct correction* strategy (Hendrickson, 1980; Lee, 2004). Direct corrections may take various forms, including crossing out a superfluous word or phrase, inserting a missing word, bracketing a misplaced word and indicating its proper place in the sentence, or writing the correct form above the errors, across it or in the margin (Ferris, 2006; Hendrickson, 1980). The least direct correction technique, according to Hendrickson, is when the teacher underlines a word and provides a written clue.

Indirect corrections, on the other hand, refer to strategies that teachers use to indicate that an error has been made without providing the correct form. There is also a further distinction to be made between coded and uncoded indirect corrections. Coded feedback is when the teacher indicates the type of error using a code that is known to the learners, for example SP for a spelling error. Uncoded feedback is when the teacher indicates the location of the error using various techniques such as circling the error, underlining the error, inserting arrows, using question marks or counting the number of errors in the margin, but leaves the learners to diagnose the error themselves (Hendrickson, 1980; Lee, 2004). In a recent publication, Ellis (2008) provided a typology of the feedback options available to teachers, in which he establishes a further distinction between indirect uncoded feedback, and feedback accompanied by codes or brief grammatical explanations, which he refers to as metalinguistic corrective feedback.

In the second language writing research field, the terms strategy, technique and method are used to refer to the way teachers provide corrective feedback to their learners. In the world of teaching, a strategy is defined as the reasoning one employs when

thinking about a subject matter; a technique, on the other hand, is the means by which a strategy is implemented (The Rosebrooke Company, "The difference between", Introduction,¶1). Therefore, in this study, the term *technique* refers to the different ways mentors indicated an error in their learners' written production. On the other hand, the term *strategy* is used to distinguish the different means by which teachers tried to bring their learners to focus on their errors.

2.1.2   *Corrective feedback and SLA: Implications for the L2 classroom*

The role of CF in second language acquisition (SLA) is contingent upon which learning and linguistic theory one adheres to. In the behaviorist perspective, acquiring a second language was equivalent to developing a new set of habits, through imitation and practice. Learner errors were the result of native language interference and were to be eradicated at all cost by forming new habits through imitation, repetition, and memorisation. In that perspective, CF on form was essential.

Innatist theories postulate that "human beings are born with mental structures that are designed specifically for the acquisition of language" (Lightbown and Spada, 2006, p. 201). In such a perspective, the correction of errors is irrelevant since acquisition is understood to proceed from exposure to the target language only. The earliest SLA model based on the assumption that language is innate is the Monitor Model (Krashen, 1981) which posits that there are two systems at work in learning a second language. The conscious system, leading to learning, is only available through the Monitor while the subconscious system, leading to acquisition, requires "meaningful interaction in the target language" (Krashen, 1981, p. 1). CF on form can play a role in learning, but only if the Monitor conditions are met (sufficient time, conscious focus on form and knowledge of

the rules). But it can also be detrimental as some learners become "over-users" of the monitor and are so concerned about the accuracy of their utterances that they are unable to become fluent speakers (p. 15). Affective factors are also very important in Krashen's Monitor Model, and error correction is viewed as detrimental to the learning process if it raises the learners' anxiety and puts them on the defensive (Krashen, 1985). Krashen also developed several hypotheses grouped under the label "*Input Hypothesis"* which states that humans acquire language in "only one way – by understanding messages, or by receiving *comprehensible input*," (p. 2), which he defines as language that learners are exposed to that is slightly ahead of their current stage of language development.

But other applied linguists saw a need to focus "on communicative proficiency" (Richards & Rogers, 1986, p. 153). These concerns led to the development of the communicative language teaching (CLT) approach considered by Lightbown and Spada (2006) to be an offshoot of innatism because it operates on the assumption that language development occurs when learners focus on meaning; in this approach, direct instruction is not deemed necessary if learners are exposed to sufficient comprehensible input. The objective of the communicative approach was to bring the learners to a level of social competence where they could use the language appropriately in any given context. In this framework, the functions of language are crucial and because communication is the goal, meaning takes precedence over form. Knowledge of forms and rules is important inasmuch as it helps convey meaning, and error correction should never interfere with the learners' need to communicate. In fact, errors on form are not viewed as problems; rather they are to be considered as evidence of the level learners have reached in their language development (Corder, 1967), and they are to be corrected only when they impede communication.

While innatists see language as an intrinsic ability to generate syntactically correct utterances, proponents of interactionist approaches believe that language emerges and develops in interaction with others. A competent L2 speaker does not necessarily use the right word, the right grammatical structure, or the correct morphology, but is apt at seizing the opportunities to test hypotheses about the language, solve communication problems, negotiate meaning, and develop a language repertoire adapted to the situation.

More recently, interactionist approaches, inspired from two major trends in cognitive psychology, information processing and constructivism, led to different hypotheses and models that each recognizes the role of interaction in the L2 acquisition process. Lightbown and Spada (2006) consider the Interaction Hypothesis (Long, 1983) and the Noticing Hypothesis (Schmidt, 1990) as direct heirs to the cognitive school, while they associate the Comprehensible Output Hypothesis (Swain, 1985) to the sociocultural framework. In the former perspective, interaction is the trigger that activates the learners' internal learning mechanisms by providing the necessary comprehensible input. Interaction itself does not lead to acquisition; it is the opportunities it creates for the negotiation process to occur that do. In the latter, the acquisition of language is intrinsically linked to social practices and to what learners can do in collaboration with others. In that perspective, interaction constitutes development itself (Vasseur, 2002). But in all the above-mentioned hypotheses, interaction is a key element of the L2 acquisition process.

The current that has been the most influential for the L2 classroom, however, is the line of research that has looked at the interactional structure of conversations between native and non native speakers or between non native speakers, such as the Interaction Hypothesis (Long, 1983), and the Comprehensible Output Hypothesis (Swain, 1985).

Long's *interaction hypothesis* (e.g., 1996, 1999) posits that it is through the modified input[3] that learners are exposed to in their interactions with native speakers, and as a result of their struggle to negotiate meaning and keep the conversation going, that language development occurs. Meaning is negotiated through the use of various interactional adjustments made by both speakers engaged in a conversation. Devices used in the negotiation process include "repetitions, confirmations, reformulations, comprehension checks, confirmation checks, clarification requests" (Long, 1996, p. 418). In native-speaker/non-native speaker conversations in the real world, the above-mentioned devices are used to ensure comprehensibility of the message. But in the second language classroom, Long (1996) believes that the negotiation process must go one step further as comprehensible and modified input alone will not lead to accuracy if it does not focus the learner's attention on the deviant forms in his output. This negotiation of form pushes learners to notice erroneous forms, and it is posited that what learners notice in input will become intake for learning. This is supported by Schmidt's (1990) noticing hypothesis which states that there is no such thing as subliminal learning (p. 83), and that the only path to language learning involves conscious noticing.

Swain (1985) formed her *comprehensible output hypothesis* on the observation that after years of interaction with peers and teachers and exposure to comprehensible input, learners in French immersion classrooms, although quite fluent in their second language, still failed to perform in a native-like way, especially in the area of grammatical accuracy. She argued that for interaction to lead to grammatical accuracy, learners needed to be provided with the opportunity to test their hypotheses about the language by producing it themselves, and not just by hearing it. Having to produce language and be

---

[3] Input that is modified to make it comprehensible to non-native speakers.

understood also pushes learners to try to convey a message that is adequate and grammatically correct. In addition, it forces the learner to move from simply understanding the language - a process which does not necessarily imply attention to form - to producing it, which, in contrast, requires the capacity to put syntactic elements together in a way that will make the output understandable to an interlocutor. Swain also claims that producing output is cognitively more demanding than processing input, and suggests that when learners are provided with corrective feedback, they can "notice the gap" (Schmidt & Frota, 1986), that is, they can measure the difference between what they know and what is correct. Later, Tocalli-Beller and Swain (2005) refined the concept of comprehensible output by adding the notion of cognitive conflict, defined as follows: "it is an intellectual conflict; it is issue-oriented, and it enhances learning as it usually leads to the discussion of different points of view" (p. 6). This would occur when learners are confronted with a reformulation of what they produced, in oral or written form, and are thus given the opportunity to analyse and question the corrective feedback provided by more proficient speakers of the target language.

To summarize, in interactionist approaches, the role of CF is to get the learners to "notice the gap", in other words, to notice differences between the target language and their own interlanguage. It also plays a crucial role in giving learners the opportunity to test their hypotheses about language when hearing or reading the correct form provided by their interlocutor.

In an instructional context, as opposed to a naturalistic environment, CF may play an even more essential role. As Swain (1985) noted, and later Lyster and Ranta (1997), learners in the L2 classroom are often interacting with their peers who share, so to speak, the same interlanguage and understand each other's mistakes. In that context, for L2

development to occur, interaction between learners, or between teacher and learners, must be framed within an instructional context that encourages learners to produce more accurate language. If the teacher does not use pedagogical strategies such as CF to bring learners to focus on form and not just on meaning, it is very likely that learners will continue making the same mistakes and will not necessarily progress towards more precision and accuracy. In that context, what type of CF is provided, when, and how, is hypothesized to have a great impact on its usefulness to the learners.

2.1.3 Differential effects of corrective feedback types on SLA

In the L2 classroom, teachers use various corrective feedback strategies to bring their learners to use the correct form. But the type of feedback provided can be inhibitive, rather than facilitative. In the oral feedback literature, Lyster & Ranta (1997) observed that teachers relied a lot more extensively on recasts[4] than on any other type of adjustments, and that, unfortunately, recasts very rarely led to uptake[5] on the learner's part. One of the possible reasons why recasts were not successful is that they did not lead to noticing since, quite often, learners did not understand the recast as a correction but rather as a repetition or a confirmation of what they had just said. Uptake, on the other hand, occurred more frequently when teachers used feedback strategies that did not provide the learners with the correct form and pushed them to self-repair[6]. The same has

---

[4] Recasts involve the "reformulation of all or part of a student's utterance, minus the error" (Lyster & Ranta, 1997, p. 46).
[5] "uptake reveals what the student attempts to do with the teacher's feedback" (Lyster and Ranta, 1997, p. 49).
[6] Learners self-repair when they "generate their own modified response" to an ill-formed utterance (Lyster, 2007).

been found in studies of feedback on writing where direct and indirect corrections have been seen to lead to different outcomes.

Other extraneous factors are also hypothesized to play a role in how learners make use of the feedback. Lyster and Mori (2006), who investigated the effectiveness of explicit corrections, recasts and prompts in French and Japanese immersion classrooms, found that student response was more effective when the feedback acted as "counterbalance to a classroom's predominant communicative orientation" (p. 269).

It also appears that irrespective of the environment (instruction or natural setting), learners go through the same developmental sequences, and that certain linguistic features appear relatively early while others are acquired much later. It was also observed that learners might exhibit features of two stages simultaneously, and at other times, might slip back to an earlier stage (Lightbown & Spada, 2006). However, research has shown that corrective feedback provided when the learner is developmentally ready to acquire a new feature might accelerate the learning process (Doughty & Williams, 1998; White, 1991). Aljaafreh & Lantolf (1994), who situated their descriptive study within a sociocultural perspective, observed that the right type of feedback on writing provided at the right time would bring learners at their "level of potential development," (p. 467), that is, the level at which they can function with help or collaboration. They suggest that after assessing the needs of the learners, a teacher could provide either explicit corrections or implicit corrections that would push the learners to notice the gap and question what they know or do not know.

Although the two hypotheses presented in the previous section discussed mostly the development of oral proficiency, there is no reason to believe that the theoretical arguments in favour of a role for corrective feedback in developing accuracy in oral

production would not be as pertinent for the development of accuracy in writing. As noted by Adams (2003), whereas speaking is an online activity, writing "eases the processing demands" (p. 349) as learners can look over the corrective feedback, comments, suggestions or reformulations provided by the teacher, and compare it to what they wrote. On the other hand, the strategies used to provide feedback on writing may reduce the possibilities for learners to notice the gap and benefit from the opportunity provided to them to think about the form of the language. Learners can be discouraged by the amount of corrections on their copy, or they might misunderstand the comments or explanations provided by their teacher (Hyland & Hyland, 2001), especially when the feedback is inconsistent (Cohen & Robins, 1976).

In studies of feedback on writing, different types of feedback have also been seen to lead to different outcomes. Indirect corrections, for example, provide learners only with negative evidence by pointing out that their output was incorrect while withholding the correct form. Depending on their level of proficiency in the language, or their familiarity with the target linguistic feature, learners might not be able to engage in revision after receiving this type of feedback, especially if it has been provided in the form of questions, elicitations, or suggestions (Conrad & Goldstein, 1999). The learners' ability – or inability – to engage with feedback might also vary according to the pedagogical approach that they are accustomed to (Lyster and Mori, 2006).

In summary, negative evidence in the form of CF is hypothesized to play a role in SLA by bringing learners to notice differences between the target language and their own interlanguage, and giving them the opportunity to test their hypotheses about the language when hearing, or reading, the correct form provided by their interlocutor. It can also help learners progress more rapidly in their acquisition of certain linguistic features and may

inhibit fossilization. But the issue of what type of CF to provide, when and how, is of crucial importance as there is a myriad of factors that have a great impact on its usefulness to learners.

As will be seen in chapter 3, much experimental and descriptive work has observed, studied and investigated the effects of CF on improving accuracy. Much less is known, however, about how teachers respond to their student writing, and what justifies their pedagogical choices. For a better understanding of the latter issue, we now turn to research on teacher cognition that specifically addresses the relationship between what teachers do and what they "think, know and believe" (Borg, 2003).

2.2   Teacher Cognition

2.2.1   Teacher Cognition: Knowledge, Beliefs, or Both?

How do teachers come to know what they know? What is their knowledge made up of? What is the relationship between their knowledge and what they do in the classroom? Although the study of teacher cognition is no longer in its infancy, there still is no single definition of what it consists of. Kagan (1990) describes teacher cognition as the "pre- or in-service teachers' self-reflections; beliefs and knowledge about teaching, students, and content; and awareness of problem-solving strategies endemic to classroom teaching" (p. 419). Borg (2003b) defines it as the "unobservable cognitive dimension of teaching – what teachers know, believe and think" (p. 81). In both these definitions, there is an explicit reference to teacher cognition as knowing and believing. And although a variety of terms have been used to qualify what teacher cognition is made of – attitudes, theories, images, assumptions, metaphors, conceptions, perspectives, mental lives – the two features most commonly referred to in both general education and L2 teaching

research as inherent to the concept of teacher cognition are beliefs and knowledge. Both these terms, however, are not so easily defined and the distinction between them is often blurred. Johnson (1992b) refers to beliefs as philosophical principles that guide teachers' expectations about learners and the decisions they make while teaching, a concept borrowed from Harste and Burke (cited in Johnson, p. 84). Eisenhart, Shrum, Harding and Cuthbert (1988) embrace the definition of beliefs commonly held in the fields of educational philosophy and anthropology as "a way to describe a relationship between a task, an action, an event, or another person and an attitude of a person toward it" (p. 53). Freeman (1989) does not use the term beliefs but talks about attitudes which he describes as "behaviours, actions, and perceptions on the one hand, and feelings and reactions on the other" (p. 32).

In her review of the literature on ways of evaluating teacher cognition, Kagan (1990) informs us that the terms beliefs and knowledge will be used interchangeably as they seem to be interrelated and oftentimes cover the same realities. On the contrary, Woods (1996) sees major differences between beliefs and knowledge. In his ethnographic study of language teachers, Woods distinguishes between background knowledge, namely what a person knows, facts that have either been demonstrated, or at least are demonstrable, and beliefs defined as "an acceptance of a proposition, one that is not demonstrable and for which there is accepted disagreement" (p. 199), although he recognizes that the distinction between the two is not always apparent. Nespor (1987) also goes to great length to explain the differences between knowledge and beliefs. Following a semester-long observation and semi-structured and stimulated recall interviews with eight teachers, he concluded that beliefs possessed features that made them radically different from knowledge. First, beliefs are based on assumptions that

things are the way they are ("the only reason students fail at math is because they are lazy"). Second, beliefs are affective rather than cognitive. Third, beliefs derive their power from the "apprenticeship of observation"[7] (memories, conscious or unconscious, of personal experiences, critical events, or episodes). Fourth, beliefs often include images of ideal alternative situations ("my students will be attentive because I prepare interesting lessons"). Nespor also suggests that beliefs play such an important role in the teaching profession because teachers are constantly faced with what he calls "ill-structured problems and entangled domains" (p. 324), situations to which there is no single right solution, or problems that are hard to classify into specific categories.

The concept of knowledge also encompasses a myriad of dimensions. Most education professionals agree that students preparing to become teachers must develop three types of knowledge: knowledge of self and students, knowledge of subject, and knowledge of educational theory and research (Parkay & Harcastle Stanford, 2004). Several studies of teacher thinking and teacher knowledge conducted during the eighties broadened the definition of knowledge to include what Clandinin and Connelly (1987) refers to as *personal practical knowledge*, a construct which comprises attitudes, beliefs and values and is enacted in the classroom through 'images' that teachers formed through their personal history. Personal practical knowledge, in Golombek's (1998) words, is knowledge in action.

Through a major project entitled "Knowledge growth in teaching" a group of researchers investigated the sources of teacher knowledge and how it evolves (Shulman, 1986), and distinguished three categories of knowledge: content knowledge, knowledge

---

[7] This expression was originally coined by Lortie (M. Borg, 2004) and has been cited, and adopted, by every author who subsequently investigated the notion of beliefs in education.

of curriculum, and *pedagogical content knowledge*, commonly referred to as PCK. This last category goes beyond the knowledge of content because it involves knowing about the subject "for teaching" purposes, which means having the ability to organize, present, and adapt the content to make it comprehensible to learners. The question of beliefs does not enter into Shulman's definition of knowledge, although he includes norms and ideological and philosophical values that guide teachers' action as part of their knowledge. For Freeman (1989), teacher knowledge can be broken down into four components: knowledge of subject-matter, skills – the pedagogical know-how –, attitudes and finally *awareness*, which he defines as the "capacity to recognize and monitor the attention a teacher will give to a certain aspect of his teaching" (p. 33).

In the field of L2 teaching where "the content and medium are so closely interrelated" (Andrews, 2001, p. 75), the concept of pedagogical content knowledge takes on an additional dimension. It is generally taken for granted that future teachers should possess both procedural and declarative knowledge of the language (Larsen-Freeman, 2003). In other words, it is not enough for language teachers to be proficient in the language, they must know about the language. For example, over and above their communicative ability, would-be teachers should possess an explicit knowledge of the structure of the language as well as "the ability to articulate the rules" (Johnston & Goettsch, 2000, p. 446).

This is where knowledge meets beliefs, as this dimension of pedagogical content knowledge which is unique to the field of language teaching, as it encompasses both the subject matter and the medium in which this content is presented to the learners, is hypothesized to play a crucial role in teachers' beliefs about grammar and error correction (Andrews 1999a, 1999b, 2001, 2003, 2006; Wright & Bolitho, 1993).

As noted by Clandinin and Connelly (1987), knowledge and beliefs stem from different sources and form a complex amalgam that evolves according to past, present and future personal and professional history. The "past," in this case, refers to prior knowledge. In every interpretation of what knowledge and beliefs consist of, prior knowledge always occupies center stage. This is found to be especially true in teaching as opposed to any other type of profession because teachers hold an insider's view of teaching and learning from having had years of experience being in a classroom (Pajares, 1992). This extensive experience of classrooms – generally more or less 13 years – defines our conception of what is 'good' or 'bad' teaching and contributes both to our knowledge and to our beliefs. As the popular saying goes, "we teach how we were taught," in other words, how we learn has a major impact on what we believe about the process of learning. As a logical consequence, beliefs about how languages are learned are grounded in what teachers experienced themselves as L2 learners (e.g., Borg, 1999, 2003; Fang, 1996; Freeman, 1989; Golombek, 1998; Johnson, 1992a, 1994; Mackey, Polio & McDonough, 2004; Numrich, 1996; Pajares, 1992) and, according to M.E. Ellis (2006), what contributes most to language teachers' beliefs is the role of knowledge which consists of the process of learning another language, and the result of having learned this other language.

Although, as was seen above, some authors make a distinction between beliefs and knowledge, Borg's (2003) definition of teacher cognition, the all-encompassing term in which both concepts are amalgamated used by most researchers, will be adopted in the present study. Hence, beliefs will be used as the umbrella term to include the sum of what teachers know and believe in regards to corrective feedback.

2.3 Chapter Summary

This chapter provided a brief overview of the two theoretical concepts from which this study evolved: corrective feedback and teacher cognition. It began with a definition of CF and a description of the different strategies and techniques used to provide oral and written feedback to learners. Then, the role of CF in the L2 classroom, as seen from different theoretical perspectives, as well as the effects of CF on the L2 learning process were reviewed. According to these propositions, CF can bring learners to notice differences between their interlanguage and the target language and test their hypotheses about the language. As a result, learners can progress more rapidly towards more precision and accuracy in their L2. Then, the notions of beliefs and knowledge, inherent to the concept of teacher cognition, were addressed. Educational research has brought to light the fundamental role of beliefs in how teachers develop their pedagogical practices. It has also shown how prior beliefs related to grammar and language learning dictate, to some extent, language teachers' perceptions about how to provide error correction to their learners.   The next chapter reviews pertinent experimental research in CF on writing and L2 teachers' cognition, as well as research on teacher feedback.

CHAPTER 3

REVIEW OF THE LITERATURE ON

CORRECTIVE FEEDBACK AND TEACHERS' PRACTICES

This chapter presents a comprehensive summary and critical analysis of the research on CF on writing, teacher cognition, and teacher feedback. The review of the literature on feedback on writing will be preceded by a discussion of the unresolved controversy about the effectiveness of error correction, and will end with a summary of what conclusions can be drawn from the research to date on the relative merits of various error correction strategies and techniques. The second part of this chapter will focus on the literature on teacher cognition in the field of second language education. It will review specifically the research on pre-service teachers' beliefs, as well as studies focusing on teachers' beliefs regarding grammar and error correction. The last strand of research to be covered will be the one most relevant to the topic of this study, namely, the research on teacher feedback on L2 student writing which has very recently integrated the notion of teachers' beliefs in relation to their error correction practices. Finally, this chapter will close with a summary of the various questions and hypotheses suggested by the review and explored in this dissertation.

3.1   Research on Corrective Feedback

3.1.1   Error Correction on Writing

The field of second language writing has grown considerably in the last twenty years with numerous experimental studies exploring various facets of writing (Polio, 2003). In their meta-analysis of the research on CF, Russell and Spada (2005) identified 18 experimental studies that investigated written CF, and almost all were published between 1995 and 2003.

The conflicting results shown by experimental work on CF on writing gave rise to a controversy, which has yet to be resolved, between those who support a facilitative role for error correction and those who do not. In his critical review of those studies, Truscott (1996) concluded that error correction was ineffective and that even when it was shown to give positive results, it only meant that learners could produce better work with their teacher's help, but not that they would become better writers in the long term. In her response, Ferris (1999) criticized how Truscott disregarded "research results that contradicted his thesis" (p. 4); she did not challenge his theoretical arguments, however. Her major reproach was that Truscott interpreted some results without taking into consideration variables such as the research design, the subjects and the instructional activities.

The controversy, however, only gained momentum. Truscott (1999) responded to Ferris (1999), reiterating his previous conclusions that error correction was ineffective but adding that the research base on CF on writing was probably insufficient. Ferris delayed her response until 2004, when she published a paper in which she acknowledged that we are still at "square one" (p. 56) in terms of our knowledge about error correction but that we cannot affirm that it does not work. Her major point is that, in all the studies cited by

Truscott and herself, there were inconsistencies in the research design that preclude firm conclusions.

It appears to be difficult, if not impossible, for learners to focus on both form and meaning at the same time when they attempt to process the input they receive (VanPatten & Cadierno, 1993). This would appear to be a strong argument against CF on form in the context of face-to-face verbal interactions. However it should be less so in second language writing where learners can attend to form and meaning at different stages of their writing process. As many studies have shown, though, CF on writing does not seem to have long-term effects on learners' linguistic accuracy. It appears then that there must be explanations for the lack of positive effects for feedback on form other than the learners' inability to focus on both form and meaning simultaneously. Some studies point to different explanations, such as the learners' proficiency levels, the category of errors committed by the learners, the error correction techniques or strategies used by the teacher, and the classroom context. In Guénette's (2007) review of the studies discussed by Truscott (1996, 1999, 2004), Ferris (1999, 2004), and Chandler (2004), it is hypothesized, in line with Ferris (2004), that the findings that support either the effectiveness or ineffectiveness of error correction need to be interpreted in light of design and methodology issues. Factors to consider are the correction/no-correction comparison, the scope (i.e., longitudinal versus cross-sectional,) the type of feedback and how it was provided, the data collection procedures and the elicitation tasks. In this article, it is also suggested that the findings of many studies may have been strongly influenced by extraneous variables that were either not considered or impossible to control, such as the learners' proficiency level, the classroom activities and the learners' motivation to write.

The following review of the literature will address how differences in the design parameters of these experimental studies can make comparisons of the results very difficult. For discussion purposes, studies with a similar design in terms of treatment will be discussed separately. Studies that compared feedback on form with feedback on content will be presented first; then, studies that compared different feedback on form strategies will be reviewed (see Tables 3.1 and 3.2 in Appendix A, summarizing the design and methodology of these studies).

3.1.2   Feedback Studies

3.1.2.1 Feedback on Form and Feedback on Content

Writing pedagogy has always "attributed a primary role to feedback" (Long & Richards in the series editors' preface to Hyland & Hyland, 2006) and, as previously noted, teacher feedback can focus on content or on form. With the advent of the process-writing approach during the 1970s, teachers were encouraged to go beyond their concern for grammatical accuracy, and reserve editing (or error correction), for the end of the writing cycle process. This view of writing inspired researchers to investigate the relative effectiveness of these two types of feedback.

Probably the most often cited research that showed positive results for feedback on form is the study conducted by Fathman and Whalley (1990). The authors investigated 72 ESL adult learners of mixed first language backgrounds to find effects for differing CF strategies. Participants were assigned to four different treatments: (a) no feedback, (b) indirect uncoded corrections (errors underlined), (c) content feedback, and (d) content and indirect corrections. Results showed that the group who received CF on grammar through indirect corrections demonstrated significant improvement in their

writing accuracy. However, content also improved regardless of the treatment provided, and a majority of learners receiving no feedback increased their scores in grammar and content, and even wrote longer compositions. This would tend to show that rewriting in itself is a good strategy for improving writing skills and that CF does not need to be directive (i.e., coded) for learners to improve. In fact, studies that will be presented later also provided evidence that codes could in fact be more disruptive than helpful for learners.

Ten years later, Ashwell (2000) obtained remarkably similar results: learners who received both CF on form and feedback on content were the ones with the largest gains in formal accuracy. But Ashwell (2000) included a major modification in his research design. As he was using a process-writing approach with his foreign language Japanese learners ($n = 50$), he ensured that all learners received all treatments, but in a different order, since the learners were producing at least three drafts of each composition. Group 1 received feedback on content on the first draft of their essay and CF on form on the second draft. The opposite was done for group 2, and group 3 received both types of feedback (form and content) on the two first drafts of their essays. The control group did not receive feedback of any kind. Feedback on form was indirect; errors were underlined or circled, and cursors were used to indicate omissions. Initial analysis showed that all groups were sensitive to form feedback and improved on the next draft, but that the group receiving both types of feedback simultaneously made the largest gain in formal accuracy.

Both studies had a control group, a *sine qua non* condition to proclaim the superiority of feedback over no feedback (Ferris, 2004; Truscott, 1996). However, in both groups there might have been differences in the proficiency levels of the participants

31

(Guénette, 2007). In the study by Fathman and Whalley (1990) the participants were said to be at "similar proficiency levels and had been placed in classrooms according to holistic ratings of a composition" (p. 181). However, as pointed out by Polio, Fleck and Leder (1998, p. 52), holistic scales might not be "fined-grained" enough for learners with similar proficiency ranges. Ashwell (2000) assigned his participants to the different treatment groups on the basis of an assessment of the first draft of an essay, but this assessment was conducted by the researcher himself and there is no report of interrater reliability control, a major weakness of many studies as noted by Polio (2003). Both experiments were also of short duration. The participants in Fathman and Whalley wrote one essay and had only 30 minutes to correct it, while Ashwell's learners wrote three drafts of one essay. The results of both studies indicate that learners improved their accuracy on this piece of writing, but we cannot confirm that learners would have sustained these gains in accuracy over time (Guénette, 2007).

The studies that will be discussed next had a longitudinal design. Goring-Kepner (1991) investigated which type of written feedback (form or content) is most effective with different levels of proficiency, and her participants were given feedback six times during an entire semester. She conducted her study with 60 learners of Spanish at the university level, half of whom were considered low-ability and the other half high-ability. The learners were involved in journal writing and were given feedback of two different types: errors on form were corrected (direct corrections) and brief explanations given, or comments on content were given, along with questions and suggestions. It was found that learners who had been corrected on form were not any more accurate than learners who had received only content feedback and that the latter produced a greater number of higher level propositions. But no significant interactions emerged between feedback type

and level of proficiency as the two feedback types affected both higher- and lower-verbal ability learners to the same extent. However, higher-ability learners did not produce significantly fewer surface-level errors.

Sheppard (1992) contrasted the effects of two feedback types with college-level foreign language ESL learners ($n = 26$) over a 10-week period. Both groups had the same instructor and the activities, courses and writing topics were similar. One group received feedback on content through requests for clarification, while the other groups received indirect error corrections (type and location of errors in the margins). Sheppard monitored progress by using two measures of accuracy – verb forms and punctuation – and one indirect measure of complexity (the ratio of subordinations, regardless of errors, to the total number of sentences). As far as accuracy was concerned, the form group showed significant progress in verb form use, while the content group significantly improved both verb accuracy and punctuation. There was a significant advantage for the content-only group in their use of subordination. Sheppard suggested that learners in the form-only groups used fewer subordinate clauses to avoid making mistakes since they were being corrected on form.

Fazio (2001) conducted a classroom-based experiment with 112 majority- and minority-language[8] grade 5 learners and examined the effect of three different treatments – corrections, commentaries, and a combination of the two – on their journal writing accuracy. Pupils were encouraged to write whenever they had free time and they had complete freedom over topic and amount of writing. Feedback was provided weekly and pupils were randomly assigned to one of the following groups: errors underlined and correct form provided (direct corrections), comments on content consisting of statements

---

[8] Francophone students and students whose mother tongue was neither English nor French.

and questions, or a combination of the two. Fazio found that regardless of the feedback provided, there was an increase in the errors committed in grammatical spelling that was the focus of feedback. During this experiment which lasted five months, from January to May, pupils were interviewed to evaluate their attentiveness to feedback and the interview data confirmed that they paid very little attention to CF but generally more to comments.

Semke (1984) also compared feedback on content to feedback on form, but she included both direct and indirect correction strategies. This study, conducted with 141 first-year university learners of German over a 10-week period, compared the effects of four different treatments: (a) comments only, (b) marking errors and supplying the correct form (direct corrections), (c) marking errors, supplying the correct forms and writing comments (direct corrections), and (d) coding errors and asking learners to self-correct (indirect corrections). Results were measured by free writing assignments looking at both accuracy and fluency and a cloze test, given both as pre-test and post-test. There were no significant differences on measures of accuracy between all four groups but learners who had received comments on content only showed more progress on measures of fluency. The author concluded that the results supported the theory that corrections do not improve learners' writing skills and that commenting alone is sufficient since it encourages learners to write more. While there is a strong possibility that, as the popular saying goes, practice makes perfect, the fact that learners of the comments-only group were marked according to number of words written might explain their verve. On the contrary, learners of the other three groups, whose marks were the ratio of mistakes to the number of written words, probably tended to write less in fear of making too many mistakes. Rather than proof that error correction does not work, these results may be interpreted to

mean that learners need to be shown how to self-correct or guided along the path of correction.

The four longitudinal studies discussed above (Fazio, 2001; Goring-Kepner, 1991; Semke, 1984; Sheppard, 1992) seem to show that error correction does not improve learners' accuracy over time. However, as discussed in Guénette (2007), the type of instrument chosen to measure accuracy in the first three studies might have had mitigating effects on how error correction on form was perceived by the learners. Journal writing is commonly used in the second language classroom and teachers usually respond with comments or questions, but generally do not grade or correct the learners' writing (Wang, 1996). In Fazio (2001), Goring-Kepner (1991), and Semke (1984), the treatment and duration of the experiment were adequate, but the instrument was perhaps not the most appropriate to induce development in accuracy.

As for Sheppard (1992), the correction treatment was supplemented by conferences with the teachers. Although the content group was expected to negotiate meaning only, learners received strong indications during these conferences that the form was not appropriate to the meaning they wished to convey. For these learners, improving the form was the necessary path to an improvement in meaning, while the form-only group did not have this extra motivation to be accurate. We also have to remember that the participants in this study were international college learners whose motivation is first and foremost to get into a program of study. As noted by Leki (2003), "L2 writers' life agendas may or may not ever again include writing in English" (p. 328). Therefore, improving their accuracy is not necessarily very high on their priority list. Also, Sheppard (1992) simply indicated the type of error and the location in the margin. As

will be seen in the next section, this indirect way of providing correction might not be the most effective, especially with this type of clientele.

As shown in the previous discussion, some studies provided evidence that content feedback was just as effective, if not more, than feedback on form to improve learners' accuracy. However, with the exception of Semke (1984), these studies compared only one type of feedback on form with feedback on content and it cannot be assumed that all types of feedback on form are equal. Therefore, studies that compare different error correction strategies can provide a better understanding of how learners of different proficiency levels can benefit from different types of error correction. A review of these studies follows.

3.1.2.2 Feedback on Form

In the research that investigated the effectiveness of feedback on form only, different error correction strategies and techniques were used. In the first group of studies discussed above, all provided indirect corrections (errors are identified but not corrected) and most incorporated direct corrections (i.e., errors were corrected).

Lalande (1982) conducted his study with 60 intermediate university-level learners of German to test the effects of two different error feedback strategies: direct (all errors were corrected and learners had to incorporate the corrections in their rewrite) and indirect (errors were coded and learners had to self-correct as many as they could with the help of various resources). Learners completed five rewrites and the first and last essays were used as pre-test and post-test. Post-test data showed that the experimental group (indirect feedback) committed significantly fewer errors than their counterparts in the direct feedback group. The learners receiving the indirect treatment, however, were also

involved in guided-learning and problem-solving activities while the direct correction group was simply told to recopy their text and incorporate the corrections. Findings would therefore appear to support the sociocultural assumption that in collaboration with others, "learners co-construct a zone of proximal development in which feedback as regulation becomes relevant and can be appropriated to modify their interlanguage systems" (Aljaafreh & Lantolf, 1994, p. 480). The major criticisms addressed to Lalande, however, were that there was no comparison group (correction versus non correction), and that the experiment was only a one-time occurrence. Nevertheless, significant effects were found for indirect corrections over direct corrections.

In their experimental study with 134 Japanese university learners of EFL, Robb, Ross and Shortreed (1986) contrasted direct feedback with three different indirect correction techniques: (a) errors coded, (b) errors located but not coded, and (c) errors indicated in the margin but neither marked nor coded. The experiment was conducted over the academic year (23 weeks) and five compositions were marked, the last one right after a two-week vacation. Results showed no significant differences in measures of accuracy or fluency, since all groups improved their writing regardless of feedback received. All learners also wrote more complex structures, with a slightly more positive effect for the coded group who produced significantly more additional clauses. The lack of significant effects for one type of feedback over another would seem to indicate that all forms of corrections were equal. But in this experiment, all learners were receiving exactly the same classroom instruction which put a lot of emphasis on grammar form and sentence structure. It is therefore possible that the positive effects shown by all groups were more a result of the combination of instruction and feedback, than any one type of feedback. As in Lalande (1982), Robb et al. did not have a comparison group which led

Truscott (1996) to disregard the results because we cannot affirm that a no-feedback control group would not have done as well under the same circumstances (i.e., 35 hours of instruction).

Ferris and Roberts (2001) contrasted the effects of two indirect feedback types with 72 adult ESL learners at the university level. One group of learners had their errors underlined and coded in five categories (verbs, noun endings, articles, sentence structure, word choice); another group had their errors simply underlined but not coded and a final group received no feedback at all. There were substantial positive effects for both feedback groups versus the no-feedback group but there were no significant differences between the group that received coded feedback and the group who only had its errors underlined (as will be seen later, using error codes does not necessarily enhance the salience of error corrections). Yet, the no-feedback group was more successful than the others in correcting lexical errors but, according to the authors, that might be a participant effect. The feedback groups were mostly composed of international learners, while the no-feedback group consisted of immigrant learners who probably had a better sense of what 'sounds' right in the language, after having had years of exposure to English. The lack of significant differences between the two feedback groups could be explained by the fact that, in the short term, both strategies were calling attention to specific categories of errors which learners had already been alerted to from the pre-test.

Chandler (2003) experimented with indirect feedback (underlining all errors), but she had her control group ($n = 16$) and her experimental group ($n = 15$) correct them at different times. Her experimental group corrected their errors before submitting the next essay while her control group only corrected their errors at the end of the experiment that lasted ten weeks. Learners wrote five essays that were collected every second week and

improvement was measured by calculating the error rate on the first and fifth writing assignments. Chandler found that the accuracy of learners who were required to correct their errors before submitting their next assignments improved over the semester, and that both groups increased on her measure of fluency. In a subsequent study published in the same paper, Chandler (2003) found positive effects for direct over indirect corrections (codes, underlining, underlining with codes) with 36 university-level music learners in two sections of the same ESL writing course. Although not mentioned by Chandler, her design seems to be a partial replication of the study conducted by Robb et al. (1986). All her participants received four types of feedback on different pieces of writing in an alternating fashion. Five essays were collected and corrected every second week and learners had to correct their errors or recopy the corrections before submitting their next assignment. Improvement on accuracy was measured by the ratio of errors/100 words on the revision and the following assignment. Because all learners were receiving the four treatments in alternation, Chandler compared each student's error rate after each treatment to their error rate on the previous assignment. This way, she was able to see which treatment resulted in more accurate writing on the next essay. The direct correction and underlining treatments resulted in more accurate writing, while the other two treatments had the opposite effect. In the long term, however, it was not possible to isolate the effects of each treatment type. Chandler hypothesizes that the superiority of the direct corrections is that they act as a form of recast by providing a model of positive evidence which the student is forced to repeat (in this case, rewrite). But it does not explain the transfer to the next draft since we know that recasts do not always lead to learner uptake in oral production (Lyster, 1998), although they have been proven to be more effective in certain contexts (Lyster & Mori, 2006). Chandler adds that perhaps

when learners see their errors corrected soon after writing, they internalize the correct form better. This could be interpreted as support for the assumption that CF may inhibit fossilization. Also, all but one student who filled out a questionnaire about their preferences for feedback indicated that they felt more discouraged with seeing their errors underlined and coded, than seeing them underlined only, which might explain why the underlining treatment was more effective than the other indirect treatments. Codes had not proven successful either in the study conducted by Fathman and Whalley (1990), and Ferris and Roberts (2001) did not find any difference between their coded and non-coded learners.

In this group of studies, Lalande (1982) found significant effects for indirect corrections over direct corrections. Chandler (2003) concluded the opposite, while Robb et al. (1986) and Ferris and Roberts (2001) showed that all learners improved their writing, regardless of the type of feedback provided. In each study, however, there are contextual factors that might explain the results.

In Lalande (1982), the rewriting activities in the classroom were entirely different for the direct and indirect correction groups so it makes it difficult to isolate the effects of feedback from the instructional activities the learners were engaged in. The same is true for Chandler (2003). As participants were receiving the different types of feedback in rotation, it is possible that learners who received the direct correction treatment last performed very differently from the learners who had received it first, and the direct correction method might have proven so effective because it was combined with other feedback treatments. The lack of significant effects reported by Robb et al. (1986) would seem to indicate that all forms of corrections had almost identical results. But in their study as well, the classroom context is a factor to be considered. Robb et al.'s learners

were receiving classroom instruction that placed a lot of emphasis on grammatical form and sentence structure. Therefore, all groups were perhaps very attentive to form whether or not they were receiving CF. In the case of Ferris and Roberts (2001), the variance in the performance of their groups might be attributed to the fact that they were different to begin with in terms of fluency and accuracy.

From a theoretical perspective, however, the results of these studies could be interpreted to support several assumptions about CF. Results of the feedback and guided-problem solving activities in Lalande (1982) show that interaction helped learners progress within their zone of proximal development (Aljaafreh & Lantolf, 1994). Pushing learners to draw on their own linguistic resources was found to be beneficial to learners in Robb et al.'s (1986) study. Ferris and Roberts (2001) demonstrated that providing learners with opportunities for conscious noticing had positive effects on their accuracy and Chandler's (2003) success with direct corrections seems to indicate that CF inhibits fossilization.

The studies that will now be presented extended the foci of previous research by investigating the correlation between error category and type of feedback (Bitchener, 2007; Bitchener, Young & Cameron, 2005; Ferris, 2006) and the role of noticing in helping learners revise their output (Sachs & Polio, 2007). The first two studies also investigated the merits of supplementing direct corrections with other activities. Bitchener, Young and Cameron (2005) examined whether direct explicit feedback supplemented with teacher-student conferences would be more beneficial than direct explicit feedback alone or no feedback at all on three targeted linguistic features (prepositions, simple past tense and definite articles). Their 53 subjects came from three groups who were receiving the same amount of grammar instruction even though they

were enrolled in full-time or part-time classes. Participants wrote four 250-word texts during the 12-week period and they received feedback on their first, second and third essays. The direct feedback + conference group had five-minute meetings with the researcher to ask questions about the corrections that were made. The authors first examined the effect of feedback type on each linguistic category, and then investigated the interaction between time and feedback type. Results indicated that explicit feedback + conference resulted in greater accuracy with two out of the three features (past tense and definite article). The authors hypothesize that these two categories were perhaps more treatable[9] (Ferris, 2004) because they are rule-governed. The authors concluded that the significant results on accuracy of the feedback + conference group provided evidence in favour of the noticing hypothesis. It appeared that having the opportunity to discuss their errors forced learners to pay attention and notice the difference between what they had written and the corrections they received, and helped learners test their hypotheses about the language. Findings also showed that accuracy was inconsistent across the four writing times, thus supporting earlier SLA theories and findings that learners who are in the process of acquiring a certain feature might go through a period of instability in their use of that feature (Lightbown & Spada, 2006).

Building from the previous study, Bitchener (2007) investigated three different types of direct corrections on the use of a single error category: two functional uses of the English article system. The study was conducted in two private language schools with four intact low intermediate EFL international learners ($n = 75$) who had spent less than 6

---

[9] According to Ferris (1999) and Truscott (2001), treatable errors are errors which would benefit from treatment should appropriate CF be given at the appropriate time. The concept of treatable and untreatable categories of errors will be discussed at length in Chapter 6 when interpreting the results of the present study.

months in the visiting country. Depending on whether they were part-time or full-time, learners received between 3 to 5 hours of EFL instruction 5 days a week. The use of the English article system was chosen because it was deemed potentially treatable (Ferris, 2004, 2006). Participants were assigned to four groups. The first group received direct error correction as well as written metalinguistic explanation, followed by an oral 30-minute mini-lesson given to the whole group. This mini-lesson consisted of explanations, examples and a short controlled practice exercise that was corrected afterwards. The second group received direct error correction and written metalinguistic explanations but no oral feedback. The third group received only direct error correction and the last group, the control group, did not receive any feedback on the targeted feature. The written metalinguistic explanations for the two first groups, as well as the oral mini-lesson for the first group, were only provided in the treatment session that occurred two weeks after the pre-test (on the same day as the immediate post-test). In other words, the treatment given to all three groups differed only for the first piece of writing. For the second and third writing task, all participants, except for the control group, only received direct corrections.

Results showed that accuracy on the target feature significantly improved with each new piece of writing for the three correction groups, and non-significantly for the control group. Comparisons between groups showed that group 1 (direct corrections plus written and oral explanations) and group 3 (direct corrections) outperformed the control group but group 2, who received written metalinguistic explanations as well as direct corrections, performed lower than the group who had received direct corrections only. In this study, it appears that the addition of metalinguistic explanations can significantly improve the probability that learners will benefit from direct corrections. However,

43

written explanations were not as successful as written + oral explanations so we might take this to mean that the medium through which explanations are provided to the learners makes a difference in how they perceive and pay attention to error correction feedback. It does not prove, however, that direct corrections are superior to indirect corrections. Recall that Lalande (1982), who had also provided his indirect treatment group with guided-learning and problem-solving activities, found positive effects for indirect over direct corrections.

Sachs and Polio (2007) were interested in seeing how two different types of direct feedback techniques – direct corrections or reformulations (i.e., recasts in the oral feedback literature) – helped learners in their revision of a writing task. They were building on a study by Qi and Lapkin (2001) who explored the role of noticing in a three-stage writing process, and concluded that the use of reformulation could promote noticing. Sachs and Polio conducted their first study with 15 participants who were randomly assigned to one of three conditions: (a) direct corrections, (b) native-speaker reformulations and (c) native-speaker reformulations combined with a think-aloud activity. On three different occasions over a three-week period, participants were given 15 minutes to look at corrections or reformulations on a story they had written, and were then given 20 minutes on the next day to revise a clean copy of their original story. Findings showed that the direct corrections group produced the most accurate revisions. Hypothesizing that perhaps learners had had time to memorize the corrections (a fact that was later confirmed in the post-study interviews), Sachs and Polio designed another study to try to eliminate the memorization and the learning effect that might have been induced with the original repeated-measures design. They added a control group receiving no treatment and made sure that there was a weekend between the comparison and revision

tasks. Again, the error correction group performed better than the other groups, and there was no significant difference in accuracy between the reformulation and reformulation + think-aloud groups, although they did better than the control group. From the comments made by the reformulation and reformulation + think-aloud groups, it appeared that reformulations helped learners become aware of problems in their output, and notice the gap.   This would support Swain's (1985) comprehensible output hypothesis and Schmidt's (1990) noticing hypothesis.   On the other hand, the fact that direct error corrections were more helpful would support Lyster and Ranta's (1997) observation that recasts – in this case reformulations – do not always lead to uptake because they are not noticed by the learners. The direct correction group could see their errors immediately because the corrections were written on the papers in purple ink and indicated the exact location of the errors, while the reformulation groups had to compare the reformulation to their original text and look for their errors. However, as the authors themselves state, the results do no provide evidence that the direct correction treatment would work better in the long term.

The last study to be discussed is particularly enlightening as it provides information not only on the effectiveness of one error correction strategy over another, but also on teachers' error correction behaviour[10]. In this study, Ferris (2006) sought to examine the research questions that were generated by the controversy on the effectiveness of error correction in which she took an active part (e.g., Ferris, 1999, 2004; Truscott, 1996, 2004). First, she examined the relationship between category of error and teacher feedback strategy on short-term revisions and long-term improvement in accuracy.   Second, she proceeded to identify the effect of different error correction

---

[10] This last topic will be discussed more in depth in section 3.3

strategies and how different categories of error were affected by different error treatments. Third, she wanted to know if teachers provided consistent and accurate feedback as this had been one of Truscott's (1996) arguments against feedback. Ferris collected data from 92 learners and three instructors. Participants enrolled in an ESL composition class were given content feedback on a first draft, and then error correction feedback on their revision of four essays written during one semester. Error feedback consisted of indirect corrections provided in the form of underlining with codes. Findings showed that, in 80% of the cases, learners were able to successfully edit the errors that had been indicated. In the long term, a comparison between essay 1 and essay 5 also showed that learners had significantly improved their accuracy in verb errors, but that some categories had suffered (articles and sentence structure). However, although the three instructors had agreed to provide consistent feedback using indirect corrections, they actually used the standard marking system only 40% of the time; for the rest, they either provided direct corrections, or indicated the errors without using the codes.

A careful analysis of the learners' revisions showed that learners successfully responded to direct corrections, from one draft to the next. More startling, however, is that indirect feedback without codes, or worse, with inaccurate codes (the erroneous form was underlined, but the code was not accurate), was nearly as successful as error marking with codes. It should be noted, though, that the former instances were not that frequent. In regards to the relationship between error type and error treatment, results showed that, in general, the number of successful revisions was quite high. Contrary to what had been planned, sentence structure errors were most often corrected directly by the instructors; it did not appear, however, that this direct treatment helped the learners over time. On the

other hand, most verb tense errors were indirectly corrected (codes) and learners were able to sustain improvement over time.

Ferris (2006) concluded that indirect corrections are superior to direct corrections because they were shown to lead to more accuracy in certain categories. But if we assume that some errors are more treatable or correctable than others, then perhaps the results are not evidence that indirect corrections are more effective, but rather that the combination of indirect corrections with treatable errors is favourable. Of course we do not know what would have happened if the instructors had also applied the indirect treatment to sentence structure. If we assume, as Aljaafreh and Lantolf (1994) remind us, that the learners' developmental level is a crucial factor in how they make use of the feedback, then perhaps direct corrections on untreatable features are helpful, even though they do not lead to immediate correction. As pointed out by Chandler (2003), because direct corrections provide the correct form, they are a model of positive evidence which may be useful to the learners when they are indeed ready to produce that feature. And Truscott (1996) may have a point: pushing learners to self-correct when they are not capable of doing so might be very discouraging. If teachers are concerned with acquisition, they should not be deterred by a lack of short-term results.

3.1.2.3 Summary

None of the studies presented in this review provide unequivocal evidence of the superiority of one feedback strategy over another. They do, however, build a strong case for ensuring that feedback is noticed by the learners, regardless of the feedback strategies employed. It seems that supplementing error correction with guided activities that engage learners to focus on form is beneficial. Results also show that not all error categories can

benefit from the same type of feedback. In fact, more direct forms of correction might be better with learners at low proficiency levels or with more treatable categories of errors.

Descriptive research has shown that indirect corrections are not as effective with learners who may not be developmentally ready (Aljafreeh & Lantolf, 1994) or proficient enough (Hyland, 2003) to self-correct. Before opting for one type of correction strategy over another, teachers should also consider the category of error made by the learners, as some errors are treatable (Ferris, 1999; Truscott, 2001) while others are less so. Very early on, Hendrickson (1980) had already reached that conclusion. He used both indirect and direct corrections with his learners, considering their writing goals, their level of proficiency, the categories and frequencies of errors, and the learners' motivation to learn from their errors (p. 219). Perhaps the classroom context and what follows the corrections provided by the teachers is also a determining factor in the success of any type of feedback.

There is a large body of research informing second language teachers and researchers on the effectiveness of various CF types in a controlled or natural environment. Research on teacher cognition, however, tells us that there is not always a perfect match between the error correction practices advocated by the research and the error practices teachers adopt, primarily because teachers' beliefs enter into the equation. This will be the focus of our next section. First, the research that explores novice or pre-service teachers' beliefs in general will be examined. This review will then be followed by a discussion of the very few studies that have focused specifically on how the beliefs of second language teachers in regards to grammar instruction and error correction are enacted in their practices.

3.2   Research on Teacher Cognition

3.2.1 Teachers' Beliefs

A plethora of studies have explored "what is unique to second language teachers and teaching" (Johnson, 1994, p. 440). Borg (2003b) reviewed more than 60 studies (of which 47 appeared after 1996) which he classified into three major categories: cognition and prior language learning, cognition and teacher education, and cognition and classroom practices (p. 86).   Furthermore, he identified 29 studies that focused primarily on grammar and literacy in ESL contexts. Teachers at varying levels of experience were investigated – from pre-service teachers at early stages in their preparation to teachers with several years' experience – through individual case studies and large scale surveys.

However, in line with the focus of this study, the following review of the literature will limit itself to two categories of studies. First, studies that have examined the source of pre-service or beginning teachers' beliefs in regards to L2 learning and teaching will be reviewed.   Second, because the assumption that teachers teach according to their beliefs must be verified through what these teachers "say, intend and do" (Pajares, 1992, p. 327), studies that have investigated the congruence of beliefs and error correction practices with in-service teachers will be reviewed.

3.2.1.1 Beliefs of Pre-Service Teachers

Most of the ethnographic research that examined pre-service or novice[11] teachers' beliefs provided support for the determining influence of prior language knowledge and language learning experience on language teacher cognition.

Numrich (1996) conducted a diary study with 26 novice native ESL teachers who were doing a 10-week practicum. Analysis of the data clearly showed that the experience of learning a second language was transferred over to the teaching of a second language, especially in regards to the teaching of grammar and error correction. If novice teachers felt that their desire to communicate had been stifled by their past teachers' attitude towards error correction, they were extremely reluctant to interrupt their own learners when they made an error. However, when these teachers realized that learners wanted their errors pointed out to them, they came to ponder their reasons not to correct.

Almarza (1996) designed a 10-month longitudinal observation study with pre-service teachers (*n* = 4) and also found that prior beliefs related to personal language learning experience were resistant to change. Although her participants all applied the method learned in their courses to present the subject-matter to their pupils, data collected in the interviews at the end of the study showed that they had retained the different views about language learning and teaching they had started with, and that those beliefs were rooted in their prior knowledge. Almarza hypothesized that once in the real world, away from the pressure of conforming to an imposed model, the teachers might abandon the newly-learned practices to revert to a model more in line with their prior beliefs.

---

[11] In the present chapter, the formulation used by researchers to refer to their participants (i.e., novice teachers, teacher trainees, student teachers, or pre-service teachers), has been retained.

This much was found by Bailey, Bergthold, Braunstein, Fleischman, Holbrook, Tuman, Waissbluth and Zambo (1996) who examined seven pre-service teachers' past language learning experience through personal narratives ($n = 7$). What emerged from these was the strength of the images formed earlier in life about what is, or is not, good language teaching (Clandinin & Connelly, 1987). However, reflecting on their experiences and discussing them with their peers enabled the teachers to see how these models of good and bad teaching might affect them in the future.

Considering the fact that beliefs seem to be extremely resistant to change, several researchers have looked at how teacher training and development programs can help pre-service teachers become aware of their beliefs, express them, reflect on them, and hopefully modify those that are contrary to what is known and generally accepted about the process of teaching and learning a second language.

Johnson (1994) investigated pre-service ESL teachers' beliefs ($n = 4$) and their instructional practices during their practicum teaching experience, using assigned journal entries, written journals about experiences encountered during the practicum, observations and interviews. In agreement with studies that investigated the role of prior knowledge, Johnson found that images from prior L2 learning experiences were extremely powerful. These pre-service teachers judged the appropriateness of materials, methods and theories they were presented with in light of their own experience as L2 learners and the extent to which they embraced, or rejected, this new information rested on their prior experiences, formal or informal, of learning a language. On the other hand, teachers' actions were often dictated by their determination to move on with the lesson no matter what, even when these actions were in contrast to their expressed beliefs, supporting Fang's (1996) observation that the classroom context is a determining factor

in teachers' pedagogical practices. Johnson also discovered that beliefs could change if teachers were given alternative images, especially when they held prior beliefs that were in contradiction with what they had learned in their teacher education program and witnessed in the classroom about effective teaching and learning practices. Another pattern that emerged was that teachers' projected images of themselves came into conflict with the realities of classroom life, a fact also noted by Kagan (1990) and Denscombe (1982). Pre-service teachers lacked a necessary prerequisite for teachers, the *procedural knowledge* which Kagan (1990) defines as the know-how of teaching, as well as sufficient exposure to alternative ways of teaching. Therefore, they "found themselves teaching the way they were taught" (Johnson, 1994, p. 451) simply because they had no other model to refer to, or because the reality of the classroom was too overpowering. Concurring with Freeman (1989) and others, Johnson concluded that pre-service teachers must become *aware* of their own beliefs, be exposed to alternatives, and have the opportunity to take risks in testing those alternatives.

Brown and McGannon (1998) examined beliefs about language learning and the roles of language teachers with a group of teacher trainees ($n = 35$), using the survey developed by Lightbown and Spada (1993). This survey consists of 12 statements representing commonly held assumptions about how languages are learned and should be taught, and it was administered twice in three weeks, before and after a teaching practicum. The participants came from two different backgrounds. The first group consisted of 23 TESL (Teaching English as a Second Language) students, while the other group was composed of 12 students who were training to become teachers of LOTE (languages other than English). Analysis of the questionnaires and journal entries indicated that experience gained during the practicum had some impact on beliefs, as it

changed some and strengthened others. In the TESL group, classroom experience changed the teachers' beliefs about error correction. When they first took the survey, the majority of students felt that immediate error correction was not necessarily a good thing, but by the time of their second response to the questionnaire, they felt that errors should be corrected immediately. However, there was no classroom observation so it cannot be assumed that changes in beliefs would have resulted in changes in practice. In the LOTE group, students were divided about the efficacy of immediate error correction but in the second questionnaire, a higher proportion of students agreed that errors should be corrected earlier, similarly to the TESL group. These results seem to indicate that with experience, student teachers become less tolerant of errors.

In a three-year longitudinal study, Peacock (2001) also examined how the beliefs of pre-service non-native teachers of ESL ($n = 146$) in Hong Kong changed over time. He traced the development ("improvement" as he calls it) of teacher trainees' beliefs by using BALLI (Beliefs About Language Learning Inventory), a 34-item self-report questionnaire administered every year over a 3-year program, which he then correlated with ESL proficiency scores. Peacock then compared the results to this questionnaire with similar data collected with experienced regular ESL teachers ($n = 45$) in an earlier study. Two findings worth mentioning are the mismatch between pre-service teachers and experienced teachers on two core beliefs about vocabulary and grammar, and the lack of change in pre-service teachers' beliefs over their 3-year training program. Significantly more teacher trainees agreed with the statement that "learning a language is mostly a matter of learning vocabulary and grammar rules" than experienced teachers. Moreover, when Peacock correlated the proficiency scores with the questionnaires, he found that those teacher trainees were significantly less proficient than the trainees who

had disagreed with that statement. However, Peacock does not mention whether the pre-service teachers had done a teaching practicum during that period of time. If they did not, it might not be surprising that their beliefs did not change from year one to year three of their training program since they were not confronted with the reality of the classroom. The fact that experienced teachers held different beliefs could be construed as evidence that experience is indeed the strongest predictor of change in beliefs. This supports the call made by several researchers that teachers must be given the opportunity to submit their beliefs to the test by facing the reality of classroom life (Brown & McGannon, 1998; Johnson, 1992a, 1994; Kagan, 1990), and that knowledge and beliefs evolve in conjunction with the classroom context (Johnson & Goettsch, 2002).

After data were collected, Peacock developed an instructional package to bring teacher trainees to reflect on their beliefs and raise their awareness. Trainees were told that some of their beliefs differed radically from those held by experienced teachers and they were referred to five readings that discussed the value of more communicatively oriented teaching methods. However, since Peacock did not administer the language learning questionnaire again, he could not monitor or quantify changes, if any, in the trainees' beliefs, apart from saying that "apparent changes were observed" (p. 188).

Pre-service teachers often invoke the division between theory and practice as one of the major shortcomings of their teaching education program (Spada & Massey, 1992). Macdonald, Badger and White (2001) sought to investigate the effects of two theoretical courses related to principles and theories of SLA on the beliefs, assumptions and knowledge – the BAK (Woods, 1996) of pre-service teachers. Research was done with two groups of mostly non-native speakers studying to become EFL instructors ($n = 55$), enrolled at the undergraduate or postgraduate level. Questionnaires on beliefs, again

largely inspired by Lightbown and Spada (1993), were administered two years in a row, at the beginning and end of a semester. There were no significant differences between the undergraduate and postgraduate groups at the outset of the program. However, the view of both groups differed significantly before and after the SLA courses on issues related to error correction and language learning. The undergraduate group started with much stronger beliefs that errors should be corrected immediately, but their degree of change by the end of the study was greater than the postgraduate cohort. The authors attributed this significant change to the fact that this cohort had been studying in a "communicatively" oriented approach to language teaching for one year prior to the study. However, as they note, this does not explain why they started with stronger beliefs about immediate error correction to begin with. One hypothesis is that the undergraduate students were probably closer to what they had experienced themselves as language learners and that their "insider's" view of teaching and learning (Pajares, 1992) had not yet been challenged. Another factor might explain those results, namely, the participants' L1 background and proficiency. In Brown and McGannon (1998), the teacher trainees were mostly native speakers (15 out of 23) who all but one had experience as ESL teachers and, contrary to the participants in Macdonald, Badger and White, did not believe that immediate error correction was beneficial. This result supports the findings of some studies on language awareness showing that native speakers are generally more tolerant of errors than their non-native speaker counterparts (Arva & Medgyes, 2000; James, 1977).

Through teaching journals, practicum reports, questionnaires and interviews, Mok (1994) investigated the changing perceptions of L2 learning and teaching held by experienced and inexperienced ESL teacher trainees enrolled in a teaching program ($n =$

12). As shown in other studies, teachers' conceptions seemed to rest on their former learning and teaching experiences, supporting the role of prior knowledge and classroom experience in the construction of beliefs. Mok also noted more rapid change before and after the practicum in inexperienced teachers, providing evidence that reflective activities that bring teachers to reflect on and examine their beliefs are perhaps more useful in the early stages of teaching, before beliefs can "fossilize."

Cabaroglu and Roberts (2000) also found that early awareness of pre-existing beliefs may contribute to change or development. Using narratives (language learning autobiographies), questionnaires and a sequence of interviews with student teachers ($n = 25$), Cabaroglu and Roberts monitored the process of development. After a 36-week course including observation in a school and practice teaching in another, only one participant seemed impervious to change, while two others experienced a radical shift in their beliefs. Because the changes might be considered very minor but still have an influence on students' perceptions, Cabaroglu and Roberts suggest using the terms "movement" or "development" rather than changes when referring to beliefs.

Mackey, Polio and McDonough (2004) investigated the relationship between experience, education and the use of focus on form techniques. Participants were nine experienced and nine inexperienced native-speaking teachers who gave a 30-minute lesson consisting of teacher-fronted activities at the beginning and end of a lesson, with pair or group work in between. Each lesson was given by both an experienced and an inexperienced teacher and focus on form episodes[12] were observed and compared.

---

[12] "the discourse from the point where the attention to linguistic form starts to the point where it ends, due to a change in topic" (Ellis, 2001, p. 294).

Findings indicated that although all teachers used different techniques of incidental focus on form, experienced teachers were better at exploiting opportunities that arose in the lesson to draw learners' attention to form. It was also observed that, in general, inexperienced teachers were more oriented towards meaning than form, supporting the findings of Brown and McGannon (1998) and Mok (1994). In order to see whether training could have an impact on the inexperienced teachers' use of focus on form techniques, a small qualitative study was carried out with four different inexperienced native speaking teachers enrolled in an MA TESOL program. Teachers were observed and audio taped before and after a workshop on various focus on form techniques. It appeared that the consciousness-raising activity resulted in teachers' being able to recognize the opportunities to focus on form, but that this awareness did not necessarily translate into practice. In other words, even when the teachers were aware of an opportunity for them to use a certain technique to bring their learners to focus on form, they lacked the necessary skills to do so. But there was a "movement," to employ the term used by Cabaroglu and Roberts (2000), towards applying the newly-acquired knowledge.

As mentioned in the introduction to this section, the assumption that teachers teach according to their theoretical beliefs must be verified through what these teachers do. For that reason, studies that propose to examine the congruence of beliefs with practices are generally conducted with experienced teachers. The next section will extend the previous discussion by presenting studies that have examined language teachers' introspection reports on their error correction practices.

3.2.1.2 Beliefs and Practices about Grammar and Corrective Feedback

Richards, Gallo and Renandya (2001) administered a questionnaire to experienced teachers (*n* = 126) to find out how their beliefs were reflected in their classroom practices. The objectives were three-tiered: to determine language teachers' more important beliefs, to measure changes over time, and to identify the major sources of changes. Teachers were first asked to describe briefly one or two of their most important beliefs about language learning and teaching and then to comment on what had changed in their approach since they had first started teaching. The most commonly reported core belief of teachers centered on the role of grammar and how it should be taught. Findings were also in support of the assumption that changes in beliefs precede changes in practice (Golombek, 1998), especially in relation to learner-centeredness. On that specific subject, teachers reported that what had changed the most since they had started teaching was their focus on the learners, their needs and their interests. However, on the issue of grammar teaching, divergences were found between expressed beliefs and practices. It appeared that even though teachers reported changes in their approach to grammar teaching, with a trend towards less direct, more communicative teaching, they still held the belief that grammar was a foundation of language learning, and were not sure that their "new" approach would lead to better results with their learners.

In two studies investigating perceptions and beliefs regarding the role of grammar instruction and CF, Schulz (1996, 2001) administered a questionnaire to more than one thousand learners and 200 experienced foreign language teachers. In the first study conducted in the United States, Schulz (1996) found great divergences in how foreign language teachers (*n* = 126) viewed the role of explicit grammar instruction and CF, showing that the profession was far from being unified on these topics. On the role of

error correction, however, a majority of teachers (89%) agreed that "Generally, when students make errors in writing they should be corrected" (p. 347), and 83% of the teachers believed that learners felt cheated if their teacher did not correct the work they handed in. Schulz's (2001) subsequent study conducted in Colombia with English as a Foreign Language teachers ($n = 122$) revealed a similar pattern. Additionally, in both studies, the strongest agreement between learners and teachers beliefs was found on the item dealing with correction of written assignments. Informal interviews with a small sub-group of Colombian teachers to explore the sources of their beliefs revealed that language learning experience, teacher preparation and in-service development and professional experience were at the source of their beliefs.

Burgess and Etherington (2002) also investigated teachers' beliefs and practices in regards to grammar teaching and error correction. A Likert-scale questionnaire containing 40 items about approaches to grammar teaching and perceived difficulties of teachers and learners with grammar was administered to teachers of ESP (English for specific purposes) at the university level ($n = 48$). The majority of teachers believed in the importance of grammatical knowledge for their learners and responses to items about correction of errors indicated that teachers generally experienced more difficulty in correcting learners' speech than their written work. Results also indicated that teachers' actions in the classroom were not determined by their beliefs alone, but by their learners' reactions to different approaches.

In these last studies, as well as others conducted with pre-service teachers, beliefs were inferred either from answers to questionnaires or from what teacher trainees did during a teaching practicum. But it is possible that the beliefs expressed by teachers are an expression of what they think they should believe rather than what they truly believe.

An example to that effect is the result of the first two items of the questionnaire administered by Richards et al. (2001) for which the authors had given examples. It appears that a large number of responses to those items fell in the same categories as the examples that had been provided, indicating that respondents were steered in a direction that they might not otherwise have taken. In the case of pre-service teachers participating in a practicum, it is possible, as Almarza (1996) hypothesized, that they are more worried about pleasing their instructor than affirming their beliefs, especially if these contradict what they have been exposed to in their courses (i.e., the *social desirability* effect, "the tendency to respond to items so that the answer will make the subject look good," McMillan & Schumacher, 1989, p. 257).

Other studies observed what teachers do, in addition to what they say or intend. Johnson (1992b) investigated the correlation between ESL teachers' beliefs and what they did in the classroom. First, she surveyed experienced ESL teachers ($n = 30$) from the primary, secondary and adult sectors and administered a "theoretical orientation profile" to collect information on beliefs regarding effective instructional strategies and L2 learning and teaching. The items on this profile were correlated with three instructional approaches to language teaching described as skills-based, rule-based and function-based. Results indicated that the majority of teachers possessed theoretical beliefs that consistently reflected one particular approach to language teaching. Then, in order to find out whether these beliefs correlated with classroom practice, Johnson selected three teachers at the secondary level who possessed a clearly dominant theoretical orientation and observed them on eight separate occasions. Results showed that strongly-held beliefs were consistent with instructional and pedagogical practices.

Yet other studies have shown that there isn't always a perfect reciprocal correlation between expressed beliefs and observed practices. Fang (1996) discusses the issue of consistency between beliefs and practices and concludes from his review that the complexities of classroom life are usually the major constraint on teachers' ability to teach according to their beliefs.

An observation study conducted with two experienced teachers provided evidence of divergences between beliefs and practices due, in part, to the context. Using interviews, classroom observations and samples of student work, Farrell and Lim (2005) investigated the ways these two teachers approached grammar instruction and error correction in their primary schools. Data were collected over a two-month period and consisted of pre-study interviews, two classroom observations with pre- and post-lesson interviews, as well as a sample of students' work. There was a strong convergence between one teacher's beliefs and classroom practices, and less so for the second teacher. Nevertheless, both teachers invoked time constraints to explain why they did not always teach according to the principles they believed in. As pointed out previously by Denscombe (1982) and others, the instructional context is a major factor in a teacher's decision-making process. It was also very clear in the teachers' self-reports that their view of grammar teaching was strongly related to what they had experienced as language learners, and what had worked for them. Farrell and Lim also noted that teachers were neither consciously aware of their beliefs nor of their practices before being asked to reflect on them. In support of what was found in investigations of pre-service teachers' beliefs, the authors called for teacher training activities that involve teachers in reflecting on and examining their beliefs, in other words, activities that promote awareness (Freeman, 1989).

Basturkmen, Loewen and Ellis (2004) investigated the relationship between three ESL teachers' beliefs about focus on form, and their practices in the classroom using observational and self-report data elicited through in-depth interviews, cued response on typical focus on form episodes, and stimulated recall of recorded episodes. All sources of data were then compared to see the extent to which teachers' beliefs were manifested in their classroom practices. This procedure is consistent with Kagan's (1990) view that the use of mixed-methods approaches in investigations of teachers' beliefs were superior not only because it allowed for triangulation but also because it may help capture the "complex, multifaceted aspects of teaching and learning" (p. 459).

Contrary to what Schulz reports (1996, 2001), Basturkmen et al. (2004) observed a lot of similarities in how their teacher participants managed focus on form episodes, Yet, when differences were found, they were attributed to the teachers' personal styles as well as to the beliefs underlying these styles. It was also found that teachers had different beliefs about how to provide error correction (i.e., the value of recasts) and what linguistic forms to correct. Results also showed beliefs to be inconsistent. This could be attributed to experience (the least experienced teacher was also the most inconsistent) but also to the fact that some beliefs may be "potentially conflictual rather than inherently inconsistent" (p. 267), such as just how much error correction to give without interfering with the communicative flow. Finally, the last conclusion was that there was a lack of congruence between beliefs and practices, especially in regards to the reason for a focus on form. The teachers stated that focus on form should arise when there is misunderstanding about the message, whereas what they actually did was react to a breach of code. This study also revealed that error correction was one of the most common strategies used by teachers to focus on form during communicative lessons.

Most of these studies show that although there are inconsistencies, beliefs generally precede practice. They also reveal that beliefs are amenable to change providing certain conditions are met, such as making beliefs explicit, reflecting on them and confronting theory with practice. Another factor that emerges from these studies is that inexperienced teachers might be more open than experienced teachers to re-examining their beliefs and trying out alternatives. Although they might be convinced that some of their ways are not the best ways, experienced teachers are constrained by the instructional context which does not always allow for a change in practice.

The research reviewed above has investigated how pre- and in-service language teachers develop their pedagogical practices in regards to language teaching. However, none of these studies have specifically examined how teachers respond to their student writing. In other words, little is known about the influence of error correction research on ESL teachers' feedback behaviour, and the congruence between their beliefs and their practices in regards to error correction. We now turn to research on teacher feedback to explore this issue.

3.3   Research on Teacher Feedback

3.3.1 Teacher Feedback Studies

If one examined the list of references cited in Hendrickson (1980), one would find that a great deal of the scholarship before the eighties centered around the effects of teacher feedback on L2 writing, whereas very little attention was given to the focus and form of the feedback provided by teachers. As noted by Ferris (2003), even until the 1990s, research focused almost exclusively on investigating the effects of various feedback strategies on improving student writing. Information about the way teachers

gave feedback was a by-product, so to speak, of those early error correction studies, and later, of research on student reactions and perceptions of teacher feedback (e.g., Cohen & Calvacanti, 1990, Enginarlar, 1993; Ferris, 1995; Hedgcock & Lefkowitz, 1994; Hyland & Hyland, 2001; Leki, 1991; Radecki & Swales, 1998; Schulz, 1996, 2001).

Considering that the influence of the process-writing approach did not really make itself felt in the field of L2 writing until the seventies (Matsuda, 2003), it is perhaps not surprising that early feedback studies focused on error correction, since ESL teachers were reacting mostly to language errors when responding to their student writing (Zamel, 1985). Up until then, priority had been more on spoken language, and writing was seen as a way to reinforce the oral patterns of the language. In addition, although learners might have been expected to revise their work, they were not providing multiple drafts of their essays so it made little sense for teachers to provide comments on content on a finished product (Ferris, 2003). But later studies indicate that L2 writing and composition teachers, no doubt influenced by the scholarship in L1 writing, gradually changed their feedback practices. The multiple-draft writing approach became standard practice in L2 composition classrooms: teachers were urged to provide feedback on content and organization on the first drafts, keeping feedback on the mechanics of the language (grammar, punctuation, word choice) for the last draft.

The study conducted by Cohen and Calvacanti (1990) who compared the feedback behaviour of an L1 and two ESL teachers showed that, although the L2 teachers still focused primarily on form (grammar, mechanics and vocabulary), they also provided comments on organization and content. A few years later, in a study of over 1,500 comments provided on ESL compositions, Ferris (1997) found that the majority of

comments made by teachers addressed content (organization, rhetorical development). Hyland (2003), however, observed quite the opposite. Although there was a lot of variation in the quantity given to each student, more than 50% of all feedback provided by the two teachers in her study responded to form. The two studies conducted by Schulz (1996, 2001) showed that even in the late nineties, well after the implementation of the widely-accepted writing-process approach, foreign language teachers in L2 classrooms still believed that they should provide error correction on their learners' written work.

Recently, Montgomery and Baker (2007) investigated the written feedback practices of 15 ESL writing teachers who had been teaching L2 writing at the university level for several years, and also found that teachers responded more to form than content. The teachers completed a questionnaire to investigate their perceptions of the comments and corrections they made on their learners' essays. Then, the feedback practices of each teacher were evaluated by calculating frequencies of feedback categories on multiple drafts of 12 compositions taken from six of their learners' portfolios. Results showed that teachers gave little feedback on organization, and a large amount of feedback on grammar and mechanics, all throughout the writing process. As in Hyland (2003), there was a large discrepancy in the amount of feedback given to each student. As for the relationship between teachers' perceptions and their practices, it seemed that teachers tended to underestimate the amount of feedback they gave on errors of form and to overestimate the amount of feedback they gave on global issues. In fact, teachers believed that they should – and did – provide feedback on global issues while in reality, they provided a lot more form feedback, even on first drafts. When the researchers reported their results to the teachers, nearly all of them were extremely surprised at the amount of comments they provided on grammar.

As mentioned in the introduction to this dissertation, language teachers whose obligation is to help students learn the L2 probably view their role quite differently than if they were helping students develop their writing skills for academic purposes. But it is only recently that research has examined the form and focus of language teachers' feedback in regular language classrooms, as opposed to writing and composition environments.

Lee (2004) investigated teachers' perspectives and practices regarding error correction in writing by administering a questionnaire to more than 200 pre-service and experienced teachers, and asking a subset of 59 practicing teachers enrolled in an English language education program to do the same error correction task immediately after responding to the questionnaire. In terms of CF strategies, the results of the survey and the data from the error correction task concurred. More than half the errors were directly corrected by the teachers, and the only other feedback strategy was location of errors with error code (indirect). Teachers said they believed it is their responsibility to correct – hence explaining the preference for the direct correction technique – but nearly all of them mentioned that learners should learn to locate and correct their own errors. Results also indicated that teachers tended to mark errors comprehensively rather than selectively. In addition, Lee found that close to half the feedback provided by teachers was inaccurate (wrong code or incorrect corrections). Teachers reported that it was sometimes difficult for them to find the exact code for an error and Lee concluded that teachers needed more training and practice with error correction. However, as noted by the author, because it was an artificial correction task, it is possible that teachers "deviated from their normal practice" (p. 300).

A problem with coding, as well as a tendency to prefer direct corrections, was also evident in Ferris (2006). Although Ferris was working with composition instructors at university, she sought to examine, among other research questions, whether teachers provided consistent and accurate error correction feedback. Even if all instructors had agreed to use the same marking system based on a standard error chart, and provide indirect corrections, they did not. They only used the standard marking system 40% of the time; for the rest, they either provided direct corrections, or indicated the errors without using the codes or worse, with using inaccurate codes. Ferris also observed that what she termed *treatable* errors (verb tense, verb form, subject-verb agreement, articles, pronouns and spelling) received indirect corrections nearly 59% of the time, whereas the *untreatable* errors (word choice, idioms, sentence structure) received direct feedback in over 65% of the cases. Ferris hypothesized that the instructors provided direct corrections when they felt – intuitively – that their learners would not be capable of self-correcting, a fact that was later confirmed in interviews conducted after the semester. In this particular study, this lack of consistency on the part of the instructors proved to be a problem, but it also indicates that teachers can adapt their error correction strategies, whether consciously or unconsciously, to their students' needs and differing abilities.

Furneaux, Paran and Fairfax (2007) examined the feedback practices of ESL teachers with 2 to 16 years of experience in secondary schools from five countries. All teachers ($n = 110$) corrected the same essay and their comments were analyzed in terms of the "reader" role they assumed, as well as the focus of their feedback. A total of 4,637 feedback annotations were coded and analyzed. The six reader roles identified by Furneaux et al. were the following: *advisor,* identifying areas where the learners need to

do more work; *initiator*, providing indications but withholding the correct form; *mutator,* altering the text; *provider*, giving the correct form; *suggester,* recommending better alternatives; and *supporter*, responding positively with symbols or comments. The role that occurred significantly more than others was that of *provider* (direct corrections) and the second role most often assumed by teachers was that of *initiator* (indirect corrections). Grammar-oriented corrections accounted for 45% of all corrections and were given mostly through the *provider* role, in other words, with direct corrections.

Lee (2008) investigated the error correction practices and beliefs of secondary school teachers, and found that teachers' error correction behaviour was far from consistent with their beliefs. First, Lee surveyed what teachers "say" they do and "believe," by administering a questionnaire to 206 secondary teachers. She then investigated what teachers "do" by collecting texts corrected by 26 Cantonese-speaking secondary EFL teachers who had between 2 to 15 years teaching experience, and conducting individual interviews with six of these teachers. Instead of correcting an artificial essay, as had been the case in the previous study (Lee, 2004), each teacher participant was asked to submit five or six texts to which they had provided feedback that was consistent with their usual responding behaviour. A total of 174 student essays written by secondary 1 to secondary 5 learners (grades 7-11) were collected. This study, as the previous one, was conducted in Hong Kong, where secondary curriculum guidelines are very much in line with advice provided in the CF literature, such as the use of indirect feedback techniques. The program also advises against *comprehensive* error correction, that is correcting all the errors made by the learners, and over-reliance on direct error correction**.** Contrary to what could have been expected, findings indicated

that most of the corrections and commentaries made by the teachers addressed grammar and vocabulary, and that direct correction techniques were used more than 70% of the time. One of the first elements to emerge from the interviews is the fact that most teachers were not aware of the recommended principles of the program curriculum. The second element is that the instructional culture prevalent in the schools is still greatly preoccupied with accuracy. In fact, teachers are expected to provide detailed error feedback and are even evaluated according to that principle because public school examinations assess form (accuracy) rather than content. In a subsequent article based on the same data, Lee (2008b) analyzed what she refers to as "mismatches" between teachers' beliefs and their practices. She lists ten mismatches and concludes that these are probably due to contextual factors such as exam pressure and school policies, but she also considers the possibility that teachers may simply have been making excuses when faced with the contradiction between their expressed beliefs and their practices. Lee concludes that this issue must be explored further by asking teachers to probe deeper into their assumptions and underlying beliefs.

3.4   Conclusion

On the one hand, advice found in published research points more and more to a combination of CF practices that take into account the level of the learners and the categories of errors they commit. But there is neither specific nor practical guidance nor suggestions given to pre-service teachers on how exactly this should come into effect, and even if there were, teachers would not necessarily be aware of those prescriptions (Lee, 2008). Some research has shown that at the beginning of their careers, teachers are overwhelmed by a myriad of contextual factors such as the pressures of the working

environment, the influence of colleagues, the need to keep their classroom under control, etc. Faced with all these challenges, teachers will develop what Denscombe (1982) refers to as the "hidden pedagogy" (p. 249), a combination of prior knowledge, beliefs and classroom experience. More than anything else, this hidden pedagogy will dictate the error correction behaviour of teachers, a behaviour that might be in direct contradiction with recommended principles in the curriculum or even with teachers' expressed beliefs. Four recent studies (Ferris, 2006; Furneaux et al., 2007; Lee, 2004, 2008) conducted in different instructional contexts have provided evidence that teachers have a tendency to rely overwhelmingly on direct corrections. Perhaps they do so because they feel that learners are not yet capable of self-correcting or because they feel that this is what the students, the school authorities and, in some cases, the parents expect of them. As noted by Fang (1996), the classroom context is a determining factor in teachers' practices.

On the other hand, as research on teacher cognition has shown, perhaps teachers' beliefs are so deeply ingrained that they are extremely resistant to change even in the face of contrary reality, such as the lack of effects of error correction on learners' accuracy. Another possibility, as shown in Montgomery and Baker (2007), is that teachers may not even be aware that they are not actually doing what they profess to do.

Our knowledge about what types of CF are most useful is constantly evolving. But, as pointed out by Furneaux et al. (2007) and Lee (2008), there seems to be a dichotomy between the behaviour of teachers and what is known, and recommended, about effective feedback practices. The project conducted with pre-service ESL teachers that will be reported in the following chapters will hopefully extend our understanding of these issues.

CHAPTER 4

METHODOLOGY

This chapter presents the research design, the context in which the study was conducted, the participants, the instruments and the procedures, including the identification protocols for the errors made by the learners and the error correction techniques used by the pre-service teachers, as well as the data organization, coding and analysis. To facilitate understanding of the various steps undertaken in this study, the last section (4.8) will present the project implementation schedule.

4.1   Design

This study examines the different strategies used by pre-service ESL teachers (the mentors[13]) in reaction to learners' errors in their written work. It attempts to determine the association between two variables: the categories of errors committed by learners and the CF strategies and techniques used by the mentors. Furthermore, it investigates the congruence between the mentors' CF behaviour and their beliefs regarding error correction, and seeks to establish whether those beliefs changed as a result of the mentors providing CF to learners over a school semester.

The two theoretical frameworks that this study builds upon are traditionally investigated through different research paradigms. The findings of research on CF and teacher feedback are commonly reported quantitatively, in order to allow for predictions

---

[13] From this point on, the term *mentors* will be used to refer exclusively to the pre-service ESL teachers who participated in this study. The terms *mentorees* and *learners* will be used interchangeably to refer to the high school students.

and generalizations. On the other hand, research on teachers' beliefs is generally qualitative, since its goal is to report rich descriptions of a complex phenomenon in its totality (Johnson & Onwuegbuzie, 2004). In the present study, in accordance with the views of Creswell and Plano Clark (2007) and Johnson and Onwuegbuzie, the perspective was that the use of both research paradigms was not incompatible, and that the combination of both would help to better capture the complexity of the teachers' CF behaviour: their actions, their perceptions, and their beliefs.

Therefore, this study uses a mixed method research design which involves both collecting and analyzing quantitative and qualitative (Creswell & Plano Clark, 2007). These authors describe four ways that researchers can mix qualitative and quantitative data. In the present study, because different research questions required different data, an embedded correlational design was adopted. An embedded design is needed when "a single data set is not sufficient, that different questions need to be answered and that each type of question requires different types of data" (p. 66). Unlike the triangulation design where different sets of data converge to answer the same questions, in an embedded correlational design one set of data is used to supplement the other. In Cyberscript, the two first research questions required the collection of quantitative data, while qualitative data was needed to provide answers to the third and fourth research questions, and to explain the outcomes obtained to the two first questions. It was a one-phase study where both sets of data were collected, analyzed and interpreted concurrently. Figure 4.1, inspired from Creswell and Plano Clark, illustrates the design of this study.
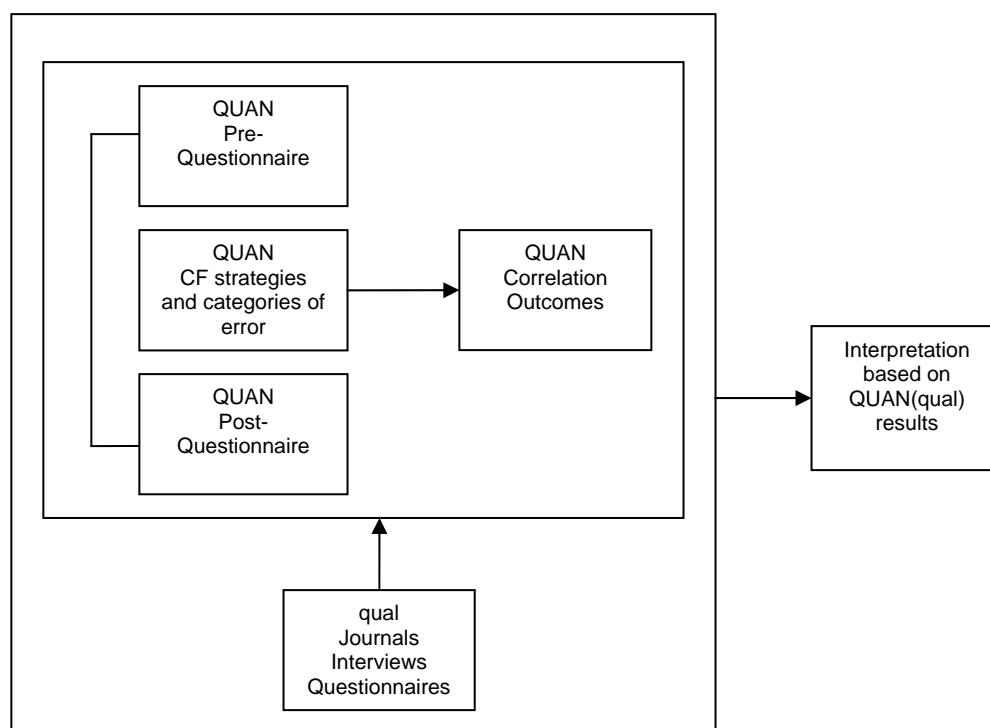
Figure 4.1 The embedded correlational design of the Cyberscript study

The principal data collection instrument was the correspondence exchanged between mentors and learners, namely, the learners' original texts and the mentors' corrections. These quantitative data were supplemented by qualitative modes of enquiry: questionnaires on beliefs, journal entries and semi-structured guided interviews. The types of error correction strategies and techniques used by the mentors and the categories of errors made by the learners, as well as the pre- and post-study responses to a questionnaire on approaches to grammar and error correction will be reported and analyzed quantitatively. A conceptual analysis of assigned journal entries completed during the project, data obtained from semi-structured guided interviews with the mentors conducted after the project had ended, and mentors' responses to the questionnaire, will

be reported qualitatively through narrative descriptions. These latter sources of information will be examined in order to further explain the quantitative results. These instruments and the data collection procedures, as well as the data organization, coding, and analysis will be described in depth in sections 4.4, 4.5, 4.6, and 4.7.

4.2 Research Context

4.2.1 Québec Instructional Context

In the year 2000, a major curriculum reform referred to as the "pedagogical renewal" was implemented in Québec's elementary and secondary schools. This reform is based on the foundations of socio-constructivism, a theory which postulates that it is through our interaction with others and our environment that we construct our knowledge.

In the wake of this new program, the pedagogical regime was modified and organized into multi-year learning cycles. Elementary education is organized into three two-year cycles, and secondary education is divided into two cycles: the first covers two school years (grades 7 and 8), and the second is spread over three years (grades 9, 10 and 11). The 2006-2007 school year marked the introduction of English as a second language for grade 1 and 2 pupils.[14] The secondary school learners who participated in the present study and had started school in 1998 and began learning English in grade 4; therefore they had received approximately 400 hours of English instruction when they started secondary 3 (i.e., year one of the Secondary Second Cycle) in the fall of 2006.[15]

---

[14] Up until 2001, ESL instruction started in grade 4. At that time, the pedagogical regime changed to include ESL instruction in grade 3.

[15] In the Québec school system, regular ESL students typically receive 144 hours of ESL instruction at the primary level followed by approimately 500 hours at the secondary level (SPEAQ, 2002).

There are two ESL programs at the secondary level: the English as a Second Language Core Program (regular clientele; usually called "ALS", "ESL" or "Core ESL") and the Enriched English as a Second Language Program (advanced learners, usually called "Enriched ESL," "Advanced ESL," or "ESL-LA").

While the previous program of study was objective-based, the new Québec Education Program focuses on the development of competencies. Whereas an objective is quite specific (*to inform themselves about facts or events*, terminal objective no. 6 in the previous secondary ESL program,) a competency is much more general and refers to a set of resources (knowledge, concepts, abilities, attitudes), which, when integrated, become the foundation of a way to act ("*savoir agir*"). At the end of their secondary schooling, ESL learners are expected to have developed the following three competencies: *Interact orally in English*; *Reinvest understanding of texts*; and *Write and produce texts*. For the third competency, learners in secondary 3 are expected to be able to write simple messages that contain some complex sentence structures, idiomatic expressions and accurate vocabulary. Although the primary focus is on the meaning of the message, learners should become aware of errors in form that impede the comprehension of their message and gradually notice and correct their errors more autonomously. In the preliminary version of the evaluation criteria for competency 3 (winter 2008) at the end of the Secondary first cycle, it is expected that learners show "advanced understanding of the language conventions targeted because they are used correctly" (MELS, 2008).

For oral communication, Québec ESL teachers are reminded to provide reactive feedback (i.e. direct the learners' attention to errors they have made) through various feedback techniques taken from Lyster and Ranta's (1997) typology of oral CF moves.

When it comes to writing, teachers are told to bring their learners to focus on form by integrating noticing activities in the learning process. For example, "in a text that describes the events that led to the sinking of the Titanic, teachers direct students' attention to the verbs in the past tense" (MELS, 2004). There is no guidance, however, as to which feedback strategies or techniques they should use to correct learners' errors in their written texts.

4.3 Participants

The participants for this study were one group of mentors, and two groups of secondary 3 high school ESL learners.

4.3.1 Mentors

The mentors were 18 teachers in training in their 5th semester (3rd year) of a 4-year Bachelor program in Teaching English as a Second Language at a francophone university in Montreal. They had already completed 15 compulsory courses in the program, including a 5-week internship at the primary level. In the fall semester (2006), the mentors were registered in four courses given intensively over a 10-week period (*Teaching Grammar to Second Language Learners, Evaluation in ESL, Teaching ESL: texts,* and *Preparation for Internship 3: ESL at the Secondary level*)[16]. In mid-session, at the beginning of November, they were due to start a 5-week internship in high school.

---

[16] Three mentors were not registered in the *Teaching Grammar* class. As will be seen later, this fact was hypothesized to have an impact on their CF behaviour.

The collaboration project between the mentors and the learners, which came to be known as *Cyberscript* and will henceforth be referred to as such, was conducted in the context of the course *Preparation for internship 3: ESL at the Secondary level*. The objective of this course is to prepare future teachers for the "real world" and engage them in instructional activities that they can later apply in their classroom when they do their internship. Course requirements always include practical activities to be done with and for ESL learners at the secondary level (visits from ESL learners and teachers, interviews, tutoring and monitoring activities). The project was one of five compulsory assignments in the course *Preparation for internship 3: ESL at the secondary level* and was worth 25% of the term mark.

This group of mentors consisted of 13 females and 5 males. The majority of mentors came into the program right after completing CEGEP[17] with a few exceptions. Three mentors had studied in a different field and already possessed a university degree before coming into the program, and there were two mature women in their late thirties. Most mentors also had some teaching experience. One of the older participants had been teaching without official certification, doing long-term replacements. As for the others, they had been doing supply teaching since the first year they came into the program. The majority of participants (13) were French native speakers with an excellent command of English and, in many cases, knowledge of a third language. Two participants had one native English-speaking parent and one French-speaking parent so they declared both English and French as their native languages. The other three had a different native language (Romanian, Greek, and Italian) but, except for the Romanian participant, they

---

[17] *Collège d'enseignement général et professionnel.* In Québec, after secondary 5, students who wish to attend university must complete two years of Cégep.

had been educated in the Québec francophone school system. Of the native francophone participants, eight had knowledge of a third language. Before their admission into the program, the participants all had to take an English exam consisting of a grammaticality judgement test and a 500-word essay. Their linguistic competency was also assessed during their first-year internship and was deemed acceptable for them to continue in the program.

There are no statistics available on the linguistic profile of ESL teachers in Québec. The SPEAQ organization (*Société pour la promotion de l'enseignement de l'anglais au Québec*) has a membership of approximately 900 ESL teachers but does not keep any information on the linguistic profile of its members. However, anecdotal evidence (ESL teachers who attend SPEAQ conferences, ESL teachers who receive student teachers) shows that there is a majority of ESL teachers in Québec whose mother tongue is French. In that respect, the group of mentors who participated in this project was representative of the population of ESL teachers in Québec.

4.3.2   Mentorees

The learners were two groups of secondary 3 (equivalent to grade 9 in the English school system) francophone students attending a French high school located approximately one hour west of Montreal. They were registered in the International Education program (IEP) which covers the entire five years of the secondary curriculum. They were accepted in the IEP on the basis of a placement test in Math, French and English (ESL) administered at the end of grade 6 (last year of elementary school).

Groups of secondary 3 learners were chosen because they were considered to be at an intermediate level in terms of their proficiency in English. A pilot project for the

current study conducted the previous year with secondary 4 (i.e., grade 11) repeaters –

learners who were deemed too weak in the major subjects (Math, French, English) to go

on to the next level - had shown that if the learners' proficiency in English was too low,

they wrote so little that it did not provide enough "corrective feedback" opportunities for

the mentors. Therefore, the mentors needed to work with learners who would be capable

of writing a 200 to 300-word text without too much difficulty. After discussion with the

ESL high school teacher who had participated in the pilot the previous year, and her

colleagues in the English department, it was agreed that secondary 3 IEP learners were

the most suitable participants for this type of project. In addition, it was felt by the

teachers that learners of that age and level would be more motivated by this collaboration

project than older or younger learners would.

The school is part of a network that receives subsidies in the context of a

governmental program called *Agir Autrement* created to reduce the dropout rate in socio-

economically disadvantaged areas. Learners in the IEP program are considered to be the

"cream of the crop" in the school because they have gone through a selection process and

their parents are, in general, very involved in the school and their child's education.

Contrary to the clientele in many Montreal's schools, which comprises a large percentage

of learners whose mother tongue is not French, this school's clientele was largely

francophone. In fact, the school does not have any welcoming classes (*classes

d'accueil*)[18] since they have very few immigrant learners, and most of those learners are

proficient enough in French to follow the regular, and even the international program.

---

[18] Special classes created specifically for immigrant students who are non-eligible to
attend regular classes because of their lack of knowledge of the language of instruction.

However, although all learners in these two groups should have been at a similar level of proficiency in English (i.e., "advanced"), in reality they were not. Some learners were capable of writing a 300-word essay easily while others appeared to struggle with a paragraph. But it was felt that this discrepancy in proficiency levels would provide the mentors with the opportunity to adapt their CF strategies to the needs of each of their learners.

A total of 61 learners divided into two groups of 30 and 31, respectively, participated in the project and both groups had the same ESL teacher. Their schedule included four 75-minute ESL courses in a nine-day cycle, which means an average of six hours of ESL instruction over a two-week period.

The ESL teacher agreed to participate in this project because she wanted her learners to get more writing practice. She had heard about the previous year's pilot study from her colleague, as well as several learners who had participated in the project, and she had very positive feelings towards it. She felt that giving her learners the opportunity to write for a real audience would make the writing task more interesting. But knowing how volatile the motivation of secondary 3 learners could be, she made the project mandatory, as one of the class assignments for the semester, and rewarded the learners with a 10% participation mark for their efforts.

4.3.3   Informed Consent

The mentors were informed that the Cyberscript project was designed to bridge the gap between theory and practice. They already knew about this project because their peers from the previous year had been involved in the same type of activity (see Section 4.5.1 Pilot Testing), and they were looking forward to interacting with high school

learners before actually starting their internship in a secondary school. But they were only told that the researcher wished to use the data collected for a study on the CF practices of beginning teachers at the end of the semester, after the project had come to an end and they had been given their term marks for the course. At that time, they were asked for their permission for the researcher to use the correspondence between them and the learners collected all through the semester. Therefore, their decision to participate or not in the study could in no way have any negative consequences on their grades since those had already been submitted. All mentors gave their permission for the data collected (corrected texts, questionnaires, journal entries, interviews) to be used for the purposes of this study (see Appendix B).

As for the ESL learners, their teacher had decided that the exchanges with the mentors would be part of their class assignments and she informed the parents of this project by way of a letter (Appendix B). The researcher met with the school principal to explain the project and ask for permission to come into the school and attend classes; she also provided all the necessary consent forms (Appendix B). The researcher was granted permission to use the texts written by the learners on the understanding that their identity would be kept anonymous.

4.4   Instruments

Four different instruments were used to collect and corroborate data: the correspondence between the mentors and the learners, questionnaires on beliefs, journal entries, and semi-structured interviews. These instruments are described below.

4.4.1   Correspondence

The Cyberscript project (i.e., the correspondence between mentors and their mentorees), lasted almost three months. It started at the end of September and ended in the middle of December 2006. Texts written in English by the high school learners and emailed to the mentors, and the mentors' replies (the original texts written by the learners with corrections, comments and suggestions) were collected every second week by the researcher for the duration of a school term (approximately 12 weeks).

The mentorees went to the computer lab once every nine days, for a 75-minute period, to write a message to their mentors and send it to them by email. Mentors replied and sent their corrections by email before the mentorees' next visit to the lab.

A total of 270 messages were collected and 238 were analyzed and coded.

4.4.2   Questionnaires

Questionnaires are one of the most common research instruments in the field of social sciences (Dörnyei, 2003). They are extremely useful to collect data on attitudes and opinions from large groups of participants and they have been widely used to investigate a range of topics in L2 research (Mackey & Gass, 2005). As one of the objectives of this study was to find out about teachers' beliefs and whether those beliefs were congruent with their practices, it was felt that an attitudinal[19] questionnaire was an appropriate instrument to bring the mentors to make their beliefs explicit. The second objective was to investigate whether the concrete, practical, experience of providing CF

---

[19] Attitudinal questions are used to find out about attitudes, opinions, beliefs, interests and values (Dornyei, 2003).

on form to learners over the period of time covered by the Cyberscript project would contribute to change or confirm those beliefs. Other instruments (i.e., journal entries and interview data), were used to supplement the information collected in the questionnaires and allow for a deeper exploration of mentors' beliefs.

The questionnaire is divided in three parts (see Appendix C). In Part 1, participants provided biographical data (demographics and language learning history). Part 2 gathered information on the participants' experience learning English (seven statements). Finally, Part 3 examined the participants' beliefs regarding the place of grammar and error correction in L2 learning. For the two first parts, items were inspired from existing questionnaires (Karakas-Doukas, 1996; Savignon & Wang, 2003). For Part Three, the questionnaire on approaches to the teaching of grammar elaborated by Burgess and Etherington (2002) was used[20] and 20 of the most pertinent items for this study, out of the 40 it contained, were selected. Then, an additional six items about error correction were added, inspired and modified from the questionnaires mentioned above. Out of these 26 statements, 11 dealt specifically with error correction and those items were mixed with the statements about grammar. A six-point response scale was used (strongly disagree, disagree, slightly disagree, partly agree, agree, strongly agree) so that participants would not opt for the easy way out by choosing the middle category. Although, according to research, only about 20% of participants would indeed choose this option (Dörnyei, 2003), the "undecided" category was eliminated nevertheless. Table 4.1 illustrates the six-point Likert-scale that was used.

---

[20] Permission was granted by the authors.

Table 4.1

Likert-Scale Categories

_____

1	2	3	4	5	6
Strongly disagree	disagree	Slightly disagree	Partly agree	Agree	Strongly agree

_____

Participants were also invited to add comments if they felt that some questions were missing or required elaboration. Also, in order to avoid participants marking only one side of the rating scale, both positively and negatively worded items were included, as suggested by Dornyei (2003, p. 55). For example, in responding to the following two questions that focus on the same target, a participant who agrees with the first statement (question 12) would more than likely disagree with the second statement (question 19).

12   Student use of language does not involve conscious knowledge of the grammatical system and how it works.   Ex. Agree

19   Learners need to be consciously aware of a structure's form and its function before they can use it proficiently.   Ex. Disagree

All the items addressing error correction were correlated, that is, they measured the same content area as at least one or two other items, so as to ensure internal consistency.   For example, the following items dealing with error correction were correlated: items 8, 11, 23 and 33; items 14, 20, 32 and 34; items 17, 26 and 29.

One of the limitations of a Likert scale questionnaire is that participants are restricted to a fixed range of response options. Following Dörnyei's (2003)

recommendation, it was decided to combine questionnaires with other modes of data collection procedures to allow for a deeper scrutiny of the mentors' beliefs.

4.4.3 Journal

Journals, or diaries as they are often called in L2 research, are also a common instrument to collect data on participants' learning and teaching process. One of the most well-known diary studies is the description by Schmidt of his experience learning Portuguese in an immersion context (Schmidt & Frota, 1986). Diaries are also frequently used to collect data on language learners' metalinguistic knowledge (Simard, 2004). In educational research, diaries are widely used to explore various aspects of teachers' experience, perceptions, beliefs and decision-making process (as was shown in the literature review on teacher cognition). In the present study, journals were used to "enrich questionnaire data" (Dörnyei, 2003, p. 15) and allow the mentors to reflect more deeply on their beliefs and perceptions regarding error correction.

The mentors were asked to complete four assigned journal entries on specific themes related to the project. The topics to be discussed in these entries were as follows: (a) communication with the mentorees and motivation, (b) error analysis and identification, (c) learners' reaction to feedback, and (d) error correction and L2 acquisition (see Appendix D for a detailed description of each entry). The length of each entry was not specified but mentors were encouraged to submit texts that demonstrated depth of reflection and contained arguments supported by facts or examples.

4.4.4 Interviews

Interviews are essentially "vocal questionnaires" (MacMillan & Schumacher, 1989) that can be used to elicit additional information from the participants (Mackey & Gass, 2005). In this study, the objective of the interviews was three-fold. The first was to find out the reason(s) why some errors had been ignored by the mentors when they were providing CF to their mentorees. The second was to discuss some of the comments made in the journal entries, and clarify or elaborate when the information provided had been vague or unclear. The third objective was to find out more about the mentors' experience giving CF on form to high school learners, and discuss if, and how, their beliefs had either been confirmed or changed as a result of this experience.

A semi-structured interview format was chosen, with a list of questions but enough "freedom to digress and probe for more information" (Mackey & Gass, 2005, p. 173). While reading the journal entries, the researcher had taken notes on topics that came up regularly, and underlined comments and statements that could be used to generate a discussion on CF. Therefore topics for discussions were selected and different questions were prepared (see Appendix E) but the precise wording and the sequence of the questions were based on how the interview unfolded. For the first part of the interview, one of the original mentoree's texts (i.e., without corrections) sent to the mentor was used. The second part of the interview provided a framework for a more general discussion on mentors' perceptions and beliefs.

4.5 Procedures

4.5.1 Pilot Testing

The Cyberscript project had been pilot tested the previous year mostly to ensure its feasibility in terms of logistics, availability of the computers in the school, timing and scheduling, and practical organization of the email exchanges between the participants in high school and at university. The participants had been a 3rd-year cohort of pre-service ESL teachers and two groups of secondary 4 (grade 10) ESL learners. All the procedures for collecting and safekeeping the correspondence as well as managing the communications between the mentors and the learners, were established and tested over a 12-week period. In addition, the pilot served to establish a preliminary list of error categories and error correction techniques, as well as test the following instruments: the questionnaire and the journal entries. Part of the project was done in collaboration with the professor responsible for the *SLA* course that the mentors were taking concurrently with the *Preparation for internship 3: ESL at the Secondary Level*. The four journal entries related to the Cyberscript Project were submitted as part of the *Learning Journal* required in the SLA course and were evaluated jointly by both professors.

At the end of the pilot project, interviews were carried out with the high school learners to discuss their feelings, and evaluate their motivation and willingness to participate in this type of activity. The high school teacher who had "lent" her learners also made several suggestions to improve the practical organization of the project and agreed, in principle, to participate in the study the following year.

4.5.2   Correspondence

The use of email as the medium chosen for communication between the mentors and high school learners will be discussed before describing the procedure used for collecting data from the learners and their mentors.

4.5.2.1 The use of email

Because the objective of this study was to find out about the CF practices of pre-service teachers, and evaluate the impact that the experience of giving feedback to secondary school learners may have had on their beliefs, the project could not be just a one-time occurrence. It needed to be carried out over a certain period of time and that would not have been possible if the mentors and the mentorees had had to meet face to face. The high school learners could not be brought to university, nor could the mentors visit the high school because of distance and conflicting timetables. As well, because the schedules of both groups were different, the use of synchronous communication (chatting) was also unfeasible. Therefore, corresponding through email seemed to be the best solution.   This exchange mode had been tested the previous year and had proved manageable, for both the high school learners and the university mentors.

Some studies with L2 learners have shown that the use of email can reduce anxiety and increase motivation (e.g., Bloch, 2002; Gonzalez-Bueno & Perez, 2000; Kupelian, 2001; Zolten, 1997). Email also functions as a "bridge between the language classroom and the natural setting" (Pennington, 2002, p. 195). Even though the learners know that they are writing for academic or pedagogical purposes, they are strongly motivated by the novelty of using the computer to write for a real audience, and the

excitement of receiving quick replies (Kupelian, 2001). The fact that they are alone in front of their computer renders the whole process more anonymous so they feel more at liberty to express themselves.

This much was found during the pilot project. In interviews conducted at the end of the semester, all the learners (even the very weak) admitted that writing to a person who was not their teacher and seemed genuinely interested in what they had to say, was a lot more fun than doing classroom work. However, communicating through email from the school turned out to present major challenges. There were several technical problems (computers that did not work, internet connection that was too slow, etc.). There were some user problems as well. Learners would spend the better part of the course typing their text and then would press the wrong key and lose the text which, more often than not, they had not saved. Other problems had to do with the mentors' failure to respond in time, so that when the learners came to the lab, there would not be a message waiting for them. Some of these technical problems were out of the control of the teacher and the researcher but new procedures were developed to address some of the "human-related" problems that could be solved. These procedures will be discussed below.

The mentors all owned a computer so they could work from home, on their own time, and at their own pace. However, for practical and pedagogical reasons, it was decided that the learners would use their class time to complete their writing assignments and send their emails to their mentor. By making it an in-class assignment, the teacher could ensure that the learners took their work seriously and applied themselves to their writing. The teacher reserved the computer lab for her two groups every day "6" of the nine-day cycle, which meant that the learners had a 75-minute period, once every nine days, to write a message to their mentors and send it to them by email. For the learners,

going to the computer lab and having the permission to access their email (which is usually forbidden during class time) was a welcome break from the daily routine of the classroom.

The major problem identified during the pilot project had been of a technical nature (neither the ESL teacher nor the learners knew what to do in case of bugs related to software or hardware problems). It was also discovered that several learners were not familiar with word processing and did not know how to create, name or save their documents. To prevent some of these problems from occurring during the project, the following procedures were implemented:

➢ When the ESL teacher booked the computer room, she also asked for the computer technician to be present at all times to help in case of problems with the equipment.

➢ On the first day at the computer lab, the researcher explained to the learners how to create, save and name their documents.

➢ The researcher was thereafter present every time the learners went to the computer lab (i.e., once every nine days), and circulated constantly to remind them to save what they had written so far, and to help them with any procedural problems or questions they might have. The teacher and computer technician were also present to provide motivational and technical help.

4.5.2.2 *Procedures for the mentors*

The mentors were told that the objective of the project was for them to give CF on form to the learners but they were not given any direction on which linguistic features to correct, or on what type of CF to provide, although they had been exposed to the different CF strategies and techniques in a previous couse.

During the first week of the project, the mentors were given the email address of the learners they would be mentoring. They had to send each mentoree an introductory email in which they stated the objective of the project and invited their mentorees to reply with a message about who they were, what they liked and disliked, what their interests and hobbies were, what they thought about this mentoring project and what they would like to write about.

After this initial introduction, mentors were instructed to start providing CF on form on the subsequent messages. They were also encouraged to provide feedback on content and to include in their reply some general comments and specific questions to motivate the learners to keep on writing. They had to send their corrections by email at least three days before the learners were scheduled to go to the lab. Mentors were also instructed to email all messages (the original message received from the learners and the message with their corrections) to the researcher as an UNDISCLOSED recipient (Bcc, i.e., *Blind Carbon Copy*). The researcher could then keep a copy of all messages exchanged, and ensure that all mentors replied to their learners in time.

As soon as the mentors received a message or a text from a mentoree, they were instructed to copy this original message into a folder for each mentoree. They were also instructed to keep a copy of their reply in that same folder. In other words, each mentoree folder contained two versions of their messages: the original message written by the mentoree and the same message corrected by the mentor.

Mentors were given the schedule of the learners' visits to the lab to make sure that they responded to their mentorees in time for them to receive corrections to one text before starting to write another. Detailed instructions given to the mentors can be found in Appendix F.

After the learners' second visit to the lab, it became necessary to come up with a solution for learners who could not find their mentor's reply, or who could not open the message if it had been sent by the mentor as an attachment. The researcher copied all the messages sent to her by the mentors on her memory key so that she could print them if the learners could not find them or access them. This procedure also made it more difficult for the learners to say that the mentor had not sent a reply since the researcher had copies of all the messages.

4.5.2.3 Procedure for the high school mentorees

The collaboration project started officially on the second "day 6" (September 25, 2006) of the school year. Group A (30 learners) went to the computer lab during their second period, from 9:45 to 11:00, and Group B (31 learners), went to the lab during their 4th period, from 3:00 to 4:15. That first visit to the lab was for the learners and the teacher to familiarize themselves with the equipment and the procedures, and send their first message. Then, they went to the lab six times (not counting the introductory session) between September 25 and December 14, and they were asked to write approximately 200 words each time.

On the first day at the lab, the learners were asked to write an introductory email to their mentor, talking about themselves, their likes and dislikes and their feelings about the project. The researcher explained the procedure (how to create and save the text) and monitored that the learners were doing as instructed. She gave the learners the email address of their mentor and was present during the whole period (75 minutes), circulating and regularly reminding learners to save their document. A few minutes before the end of the period, learners were instructed to save their text and email it to their mentors and to

themselves at the same time so that if there was a problem the mentoree would still have a copy of what he wrote and could send it again.

The learners then went to the lab (accompanied by their teacher, the researcher and the computer technician) every subsequent day 6: October 6, October 20, November 3, November 16, November 30, and December 14. Learners who were absent were instructed by their teacher to write their texts as homework and send it to their mentors from home.

At first, there were no pre-imposed topics for writing although the researcher had provided the teacher with a list of possible writing topics (see Appendix G). But it soon became apparent that some learners did not know what to write about so from the third visit on, the teacher imposed a topic taken from the list provided by the researcher. However, learners who were motivated by the exchange project, but did not wish to write about the topic chosen by the teacher, could write about something else, providing they could demonstrate that they were actively involved in the task.

4.5.2.4 Grouping

The mentor-mentoree pairing was done alphabetically: the first name on the mentoree list was assigned to the first name on the mentor list, and so on until every mentoree had been assigned a mentor. Since there were 18 mentors and 61 learners, seven mentors had four email partners, and 11 had three. Unfortunately, in the course of the project, three learners were expelled from the international program for various reasons. Therefore some mentors "lost" their email partners and therefore had less opportunities to provide CF. However, because this happened quite late in the process (November), it was decided not to reassign learners to other mentors because it was felt

that the mentorees' motivation to write depended, in a large measure, on the relationship established with their mentor.

4.5.3 Questionnaire Administration

The first administration of the questionnaire occurred during the first class of the *Preparation for Internship 3: ESL at the Secondary Level* course (fall 2006), before the Cyberscript project actually started and mentors were told about it. Because the mentors were unaware at that time that the data collected might be used as part of a study, the *Hawthorne* effect – the positive impact that may occur simply because participants know that they are part of an experiment - and the *halo* effect – participants trying to please by giving the answers they think are expected from them (Mackey & Gass, 2005) should not have tainted the results. The mentors were simply told that this was a questionnaire to help them make their beliefs explicit and reflect on some issues that they would come across during their upcoming internship at the secondary level.

The questionnaire had been piloted the previous year with a group of 3rd-year ESL pre-service teachers and all the items that had been unclear or had led to questions had either been eliminated or reworded. Therefore, it was expected that all mentors would be able to answer the questionnaire without needing additional information. The mentors were told not to discuss or share their answers with their peers. While they were answering the questionnaire, they were invited to raise their hand if they had any questions so that the researcher could provide clarification privately. However, after an initial comment from one mentor about the fact that the six-point rating scale did not contain an "undecided" category and therefore was more difficult to answer, no other interruptions occurred until everyone had finished answering the questionnaire.

At the beginning of the winter term 2007, the researcher was given permission by a colleague professor who was teaching the same group of learners to take up ½ hour of class time for the second administration of the questionnaire. At that time, participants only answered Part 3, since the biographical data and language learning history and experience had already been provided.

It is important to mention that, at the time of the second administration, the mentors knew about the focus of the research project because they had already given their consent for the researcher to use the data. Since there was a span of four months between the two administrations of the questionnaire, the risk that mentors would have remembered their first set of answers was very low and should not have affected the second set of responses.

4.5.4   Journal Entry Submissions

The four assigned journal entries were handed in at the end of the project, during the last class meeting on December 18. However, in order to encourage the mentors to complete these entries as they went along, rather than wait to the end, suggested deadline dates had been given for each entry. As these journal entries were part of the Cyberscript project assignment, they were graded using a holistic evaluation grid (see Appendix D) which was provided to the mentors at the onset of the project so that they knew about the evaluation criteria. Mentors were expected to write approximately four pages but they were not given a specific number of words per entry. Four mentors provided the researcher with a paper copy while the others sent their entries electronically.

4.5.5 Interview Protocol

Semi-structured interviews took place at the beginning of the winter session (see Appendix E for the interview protocol). Appointments for those interviews were made when the group met for the second administration of the questionnaire. The researcher had made herself available over a period of three weeks at times that were convenient for the mentors (i.e., during lunch time, after or before classes at university). Interviews were held in the researcher's office at the university and lasted between 20 and 45 minutes. Mentors were given the choice to do the interview in French or in English but they all chose English, although some occasionally code-switched to French. The interviews were audio taped in order to provide an objective, accurate record of what the mentors said.

In the first part of this semi-structured interview, the mentors were given a copy of an original text they had received from one of the learners they were mentoring, and asked to underline all the errors on form that they detected. This text was then compared with the version corrected by the mentors at the time of the exchange. This procedure was established after examination of the correspondence collected in the pilot study had shown that many errors on form had not been corrected, nor identified by the mentors. Was this deliberate, because mentors did not want to overburden the learners with too many corrections, or was it because they did not detect the error? This issue needed to be addressed when discussing mentors' beliefs about error correction. For example, if mentors believed that all errors on form should be corrected, it was important to examine why some errors had been left untreated.

If mentors had not underlined the errors that they did not correct, it was taken as evidence that the errors were not detected. If, on the other hand, uncorrected errors were

underlined, it provided evidence that the errors had been detected, but that the mentor had decided not to correct them. Following this error identification exercise, a discussion was initiated on the choices made by the mentors: did they correct all the errors and why? Did they use different feedback strategies and why? Did they use the same feedback strategies with all their mentorees? Did their error correction behaviour correspond to their beliefs?

Although the second half of the interview was based on comments made in the journal entries, mentors were given the time and freedom to address other issues regarding CF if they wished. Participants were reminded that this was a descriptive study, and that there was no "right" or "wrong" answers since the objective was to find out how beginning teachers develop their practices. Mentors were assured that their anonymity would be preserved, and that the interviews were taped only so that the researcher could give them her full attention without having to worry about misquoting or misinterpreting their responses.

The researcher had supervised the mentors during their internship and had developed quite a close relationship with them. The mentors felt very much at ease discussing their feelings and beliefs with the researcher, even when they had different points of view on certain topics.

4.6   Data Organization and Coding

4.6.1   Corrected Texts

Since all mentors were sending copies of their replies to the researcher, the data were collected throughout the project. However, at the end, mentors were asked to email to the researcher the folders containing all the messages that had been exchanged between themselves and the learners.

97

All mentors were given a pseudonym to be used for narrative descriptions, and were assigned a letter from A to R for message coding purposes. In addition, mentors were coded for gender, and also for whether they were taking the *Teaching Grammar to ESL Learners* course at the same time the project was ongoing, since the topic of error detection and treatment (surface errors, style, content) was discussed in that course. For example, mentor B_M_G was a male who was taking the *Teaching Grammar to ESL Learners* course, while mentor L_F_NG was a female who was not registered in that course.

When the final count of messages exchanged was done, it appeared that some mentorees had not written all the required messages, or had written considerably shorter messages than had been asked. But, because the project took place in a naturalistic environment, many environmental and human variables could not be controlled for. Some mentorees were really motivated, or very proficient, so they wrote a lot more than less proficient or less motivated mentorees. If learners were absent on the day the class went to the lab, they were asked by their teacher to write their message from home. Some mentorees heeded that call; others did not. In addition, because the pairing between mentors and mentorees was random, some mentors corresponded with very verbose mentorees (mentors A, D and G), while others were paired with learners of few words (mentors E, F and H) strictly by chance. Also, as mentioned in section 4.5.2.4, some learners were expelled from the international program. Therefore, neither the number of texts nor the number of words was equivalent across mentors.

The average number of messages corrected by the mentors was 15 (recall that seven mentors had four email partners, and 11 had three). There was an almost equal distribution between the mentors who corrected three (four mentors), four (six mentors)

or five (four mentors) messages per mentoree with one mentor who corrected six, the expected score. Because of attrition in the number of learners, one mentor ended up with only two mentorees. It was decided to exclude this mentor (mentor M) from the analysis for lack of sufficient opportunities to provide feedback to different learners on a regular basis. Two other mentors (mentors N and P), who had not saved the original messages from the learners, thus making it impossible to distinguish the corrections they had provided from the learners' original text, were also excluded. As a result, the messages written by the learners who were corresponding with these three mentors also had to be removed.

Therefore, in the end, 238 messages exchanged between 52 learners and 15 mentors were coded and analyzed. Out of the 52 learners remaining, 14 wrote six messages, 31 wrote five messages, 45 wrote four messages, 47 wrote three messages, 50 wrote two messages, and all wrote at least one message. The mentors who were paired with the two learners who wrote only one message (mentors B and F) were each corresponding with three other learners so they had ample opportunities to provide feedback and, as a result, were not excluded from the analyses.

Each text written by the learners was then identified and coded. The mentorees were given numbers (i.e., mentoree 1, mentoree 2, mentoree 3), and every mentoree's message was also assigned a number. For example, message D2.4 can be interpreted as the 4th message written by mentoree 2 assigned to mentor D. Once the texts were properly identified, they were merged into a single document to be analyzed in ATLAS Ti, a qualitative data analysis software. Then all the errors identified and corrected by the mentors were coded twice: once for error type and once for correction type.

The first step of this procedure was to categorize the type of sentence-level errors (errors on form) detected by the mentors, and the second step was to identify the error correction strategies and techniques used to identify those errors. The protocols established for that purpose will be discussed next.

4.6.1.1 Error category identification protocol

Based on existing error categories (Ferris; 2006; Kroll, 1990; Lee, 2004; Polio, 1997) and on a superficial review of the mentorees' writing, an initial error chart had been developed during the pilot project. Using this list as a reference, the categories of error that were detected and were the object of corrections, comments or suggestions by the mentors were identified. However, the texts submitted by the learners who participated in the pilot were usually very simple, consisting of short sentences with no relative clauses. Many error categories from the lists mentioned above were therefore deleted because they were either too detailed, could form part of a more general category, or simply did not seem to occur in the writing samples provided by the participants. Finally, because mentors occasionally corrected sentences or parts of sentences that were not incorrect, the category *No error* was included. The initial list of error categories consisted of 21 error types, as illustrated in Table 4.2.

Table 4.2

Initial List of Error Categories

_____

1. Article (incorrect, missing, extra)

2. Capitalization (I)

3. Contraction

4. Genitive (missing, misused)

5. L1 use

6. No error

7. Noun pronoun agreement (including wrong relative pronoun)

8. Noun ending (plural/singular)

9. Preposition (incorrect, missing, extra)

10. Pronoun inversion

11. Punctuation

12. Quantity words (much/many, a few/few, some/any)

13. Spelling

14. Sentence structure

15. Subject-verb agreement

16. Verb formation (no auxiliary verb, lack of "to" with infinitive, gerund/infinitive)

17. Verb tense

18. Word choice

19. Word form

20. Word order

21. Wrong modal

_____

This list was then used as a point of departure to categorize the errors detected by the mentors in the Cyberscript project. Again, however, it proved necessary to add and delete some categories. For example, errors in spelling and capitalization were not part of the initial list, but since mentors almost consistently corrected those errors or commented on them, the categories were added. Because all the learners were native speakers of

French, many vocabulary errors were related to their L1. Very often, the learners used a French word if they did not know the English equivalent or literally translated a French structure or expression, resulting in a calque. The mentors regularly identified those errors and quite often added comments or metalinguistic explanations which they did not necessarily provide in the case of other lexical errors. In order to distinguish those types of errors, the category *L1 use* was created.

On the other hand, it also appeared that many categories could be combined since keeping them separate did not lead to a deeper understanding of the mentors' error correction behaviour. This was the case with the categories *Plural for singular* and *Singular for plural* that were replaced by the single category *Noun ending*. All errors of agreement (subject-verb, noun-pronoun, noun-adjective, and article-noun) were grouped under the category *Agreement* and all errors having to do with verbs (tense, aspect, wrong modals or auxiliaries) were also combined under the category *Verbs*. The revised list, illustrated in Table 4.3 consisted of 17 categories.

Table 4.3

Revised List of Error Categories

_____

Error category	Explanation or example
1. Articles	Missing or wrong determiner (the, a, an)
2. Mechanics	Punctuation, capitalization
3. Style	Use of contraction, language register
4. L1 Use	Use of French word
5. Pronouns	Wrong pronoun (i.e., *my* instead of *me)*
6. Noun endings	Singular/plural (i.e. We are three *sister*)
7. Prepositions	Wrong, missing or extra (i.e. I eat a *lot candies*)
8. Spelling	Incorrect spelling
9. Structure	Grammatical arrangement of words
10. Agreement	Subject-verb, noun-adjective, article-noun
11. Verbs	Problems with verb forms and verb tenses
12. Verb choice	Misuse of to be/to have as in « I have 12 years old »
13. Word choice	Lexical choice and word form (exciting vs excited)
14. Word order	Adverbs, question formation, subject-verb-object
15. Missing word	Ex.: I think is important
16. Extra word	Ex.: It would be very easier
17. L1 transfer	Ex.: I pass comments

_____

Coding errors proved to be a challenge at times because there were several instances of "miscoding" on the part of the mentors. For example, in the following sentence: "go be **ockay** (Lex) with me" (03.2), the mentor indicated a lexical error (wrong choice of word) while, as evident from the context, it was clearly a spelling error. Infinitives (i.e., the base form of the verb), as in the following sentence: "It's hard for me

for remember" (message 03.5) cause major problems to French learners of English and those types of errors were extremely frequent in the data. However, mentors sometimes coded these errors as a "preposition" error, a "lexical" error or a "verb" error. Because the objective of the study was to examine the relationship between CF strategy and error type, the error code had to reflect the interpretation of the mentor, even if that interpretation was incorrect. Therefore, if a mentor used a code to indicate the error, that error was coded as the mentor had seen it. In the above-mentioned example (03.2), the error was coded as "word choice" because that is how it was interpreted by the mentor.

After an initial review of the 2,506 errors identified by the mentors, the error categories that contained fewer than 50 occurrences were integrated in other pertinent categories and coded again. The two categories *L1 Transfer* and *Word translated from French*, were also combined under the heading *L1 Use* because mentors marked them invariably as "French." For example, the sentence "he learns me," which could be interpreted as a transfer error from the French "*il m'apprend*," was marked as "French," while the use of the word "*vacance*" instead of "holidays," was also marked as "French." In addition, most of the errors thus marked as French were lexical. Therefore, the following categories were collapsed:

- *Verb choice* and *Word choice;*

- *L1 Use* and *L1 Transfer;*

- *Extra word* was integrated in the appropriate grammatical category (preposition, verb, article, etc.);

- *Pronouns* were integrated with the *missing word* or *word choice* categories.

Table 4.4 illustrates the final list of error categories.

Table 4.4

Final List of Error Categories

_____

1. Determiners

2. Mechanics (punctuation, capitalization)

3. Style

4. LI use

5. Noun endings (singular/plural)

6. Prepositions

7. Spelling

8. Sentence structure

9. Agreement (subject/verb, noun/adjective, determiner/noun)

10. Verbs (including all verb forms and auxiliaries)

11. Word choice

12. Word order

13. Missing word

_____

4.6.1.2 Error correction identification protocol

As mentioned in Chapter 2, the two error correction strategies used by teachers to provide feedback on form to their learners are direct and indirect corrections, coded or uncoded. Because the exchanges in the Cyberscript project took place through email and the texts were computerized, not all uncoded CF techniques normally used in giving feedback on writing, such as circling an error for example, were feasible. As a result, the mentors made use of other techniques, such as highlighting words, using different colors for different error types, ~~strikethrough~~, or ~~double strikethrough~~. Mentors also used the function *Track Changes* available in Microsoft Word to provide comments, corrections, and suggestions to their learners.

Every time the mentors indicated a correction, the word or part of sentence highlighted through one of the various aforementioned techniques, was used as the unit of analysis.

The initial list of error correction categories, illustrated in Table 4.5, emerged from what was found in the data and consisted of 16 categories culled from an examination of approximately 50 messages.

Table 4.5

Initial List of Error Correction Categoriess
_____

1. Clarification requests

2. Elicitations

3. Error identification without comments

4. Metalinguistic clues

5. Metalinguistic feedback

6. Metalinguistic suggestion

7. Strategy suggestion

8. Unnecessary feedback

9. Incorrect correction

10. Error identification

11. Error identification with error code

12. Praise

13. Content feedback

14. Error identification with metalinguistic explanations outside of text

15. Error correction with metalinguistic explanations outside of text

16. Incorrect explanation, incomplete, confusing

_____

This list proved extremely difficult to use, however, as some categories were overlapping. For example, "metalinguistic clues" was quite hard to distinguish from "metalinguistic suggestions," and quite often "metalinguistic suggestions" would be given, whether the error had been corrected or not, so it could not form a category of its own. Therefore, the next step was to identify the direct and indirect strategies or, in other words, whether the mentor had provided the correct form or not. Once that was done, error correction categories were created to account for the strategies used by the mentors to provide the correct form, or to guide the learners towards the correct form, and the new list consisted of nine error correction categories. But again, it was found that some categories were not helpful, such as the categories "unnecessary feedback," "incorrect feedback" and "elicitation". The latter was hard to distinguish from "error identification with comments," while the two former categories, although qualitatively different, were provided with or without explicit corrections. Therefore, these categories were eliminated and all occurrences were integrated in the appropriate categories described below.

All instances where the correct form was provided, either by means of a reformulation, or more explicitly accompanied by a sign that something was wrong (e.g., a word was crossed out or the correct word was inserted next to or right above the wrong word), but were not accompanied by comments, were coded as *direct correction without comments* (DC). But direct corrections were also frequently accompanied by comments or metalinguistic explanations, such as in the following example: "You use *would* when you usually suppose something. I think you wanted to use the verb *will*" (*F2.4*). As there was a high frequency of such instances, the category *direct correction with comments* (DCw/c) was created (whether or not the correction was accurate). This

category also includes instances when the comments were framed as a question, but provided the correct form, or instances when the mentors told the learners which form to use, but did not write it, as in the following example cited by Hendrickson (1980): "She finds her watch inside the drawer." In this case, the teacher had underlined "finds" and written "use past tense" just under it (p. 218).

Indirect corrections (i.e., where the mentor indicated an error but did not provide the correct form) were coded according to the technique used by the mentors to attract the learner's attention. When the mentor simply identified the error, using one of the techniques mentioned above, without providing the correct form, and without adding comments, it was coded as *indirect correction uncoded* (ICU). When the error identification was accompanied by an error code or with the type of error spelled out, it was coded as *indirect correction coded (ICC).* In addition, there were several instances where error identification was accompanied by comments, suggestions or questions. In the oral feedback literature, such instances are referred to as prompts (Lyster, 2002, 2004). By indicating that an error has been made, but by withholding the correct form, prompts "push" learners to correct their own output which is claimed to favour L2 acquisition (Swain, 1985). Prompts can be provided in the form of metalinguistic clues or elicitations – a direct question or statement inciting learners to self-repair (Lyster, 2002). In the present study, all those instances where the correct form was not given, but metalinguistic comments, suggestions or questions were provided next to the error, in a bubble (i.e. commentary) or at the bottom of the text, were coded as *error identification with comments* (ICw/c*)* as in the following example taken from the pilot project: "I have it's NOT like in French when we say « J'ai 16 ans » 16 years old." (the comment from the

mentor is in italics). However, if the comment was explicit as in the example mentioned

earlier, i.e. "use past tense," then this was coded as a direct correction.

Clarification requests, also considered a form of prompt (Lyster 2002, 2004),

became a category of its own. In Lyster (2004), a clarification request is an indication of

incomprehension and is usually manifested by asking a question about what the learner

meant. In the Cyberscript project, when the mentors asked questions and it was evident

from the context that they were genuinely puzzled by what the mentoree meant, those

occurrences were coded as *clarification requests* (CR), as in the following example: "I

haven't worst day *(you mean you did not have a bad day, or you cannot find the worst day*

of your life?)" (A1.4).

The final list of error correction strategies and techniques therefore consisted of

the following six CF strategies (see Table 4.6 for examples of each):

- Clarification requests (CR)

- Indirect corrections :

    - Error identification uncoded (ICU)

    - Error identification coded (ICC)

    - Error identification with comments (ICw/c)

- Direct corrections:

    - Error correction without comments (DC)

    - Error correction with comments (DCw/c).

Table 4.6

Final List of Error Correction Categories

_____

Error correction strategy and technique		Description	Example
CR	**Clarification requests**	Mentor asks a genuine question because he does not understand what the mentoree mean	Do you really have an uncle in Florida? That's cool! Still, I don't understand if you would like to go there or if you are going to go there in February? (B3.2)
			I'm not sure what you mean. Do you mean Putting your ca order of preference? (C4.3)
DC	**Error correction** WITHOUT comment (including complete rewrites)	Correct form IS PROVIDED	
DCw/c	**Error correction** WITH metalinguistic explanations next to the error, in bubble (commentary) or outside of text	Correct form IS PROVIDED	"should we use the verb "to have" or "to be" (A1.1.)
			I think the word you are looking for is FULL. (C4.2)
ICU	**Error identification** (underlined, highlighted, in a different color)	Correct form is NOT PROVIDED	The teenagers **is** (C1.4)
ICC	**Error identification** WITH error code or type of error spelled out (in the text, or on a correction chart)	Correct form is NOT PROVIDED	I going (**auxiliary missing**) (A1.5)
ICw/c	**Error identification** WITH comment, question or explanations next to the error, in a bubble (commentary) or outside of text	Correct form is NOT PROVIDED	Please check in the dictionary what WOOD means. I think you want to write "vouloir." (G2.4)
			Needs to be changed for the simple past. Verb to go. (G3.2)

_____

4.6.1.3 Interrater agreement

An interrating procedure was established to validate the list of error categories and ensure consistency and reliability in coding the error correction types. The interrater was an English native speaker and fellow student in the PhD program. A first meeting was established to look at some samples of the data – approximately 30 texts written by the mentorees - and code the errors according to the categories on the error list. At that time, some categories were combined and others deleted (as mentioned in section 4.6.1.1). On the second rating session, both the researcher and the interrater coded another 30 texts independently, and then met to compare and discuss cases in which there was a disagreement. The error category list was then finalized and, in a further session, the interrater and the researcher again coded a new sample of 30 texts to validate the list. The rest of the data were then coded independently by the researcher.

A second series of rating sessions was devoted to the error correction codes. The researcher and a second rater coded a certain number of texts together to agree on their comprehension of the various error correction strategies and techniques used by the mentors. In a following session, they each coded the same texts and every case in which there was a disagreement was discussed until agreement was reached. Those discussions helped to clarify and simplify the coding scheme. Once that was done, the second rater and the researcher coded two texts per mentor (i.e., 30 texts chosen at random) in which 246 errors had been corrected, and reached 84.5% agreement. This wasn't considered satisfactory so another rating session was scheduled to discuss the 48 cases where agreement had not been reached. It appeared that some error correction codes were confusing and were not distinct enough to lead to a clear decision. The error coding

scheme was revised again based on the discussions between the two raters and the final list consisted of the six categories described in section 4.6.1.2. The second rater was given another sample of 15 texts to code (one per mentor, chosen at random, but excluding the ones that had been coded previously) and the researcher coded the same 15 texts independently. This led to 93% agreement (there was disagreement on 12 of the 173 errors corrected) and was deemed satisfactory. A review of these 12 items showed that disagreement originated from errors of transcription.

4.6.2   Questionnaires

The answers to the first two parts were compiled to provide individual mentor profiles as well as a profile of the group. Data from *Part 1: Information about yourself* were transcribed in the categories illustrated in Table 4.7:

Table 4.7

Categories for Mentors' Biographical Data

Mentors	Date of birth	Age in (2006)	How did you learn English?	Native language	Languages spoken	Language spoken at home

Participants indicated their opinion about each statement in *Part 2: Experience learning English in high school*, and *Part 3: Approaches to grammar and corrective feedback* using the Likert-scale, broken down in six categories numbered from 1 to 6, as illustrated in Table 4.1 in section 4.4.2.

Part 3 was administered twice, once before the project began, and the second time, in January, after the project had been completed. Answers to each question were entered into an Excel spreadsheet but in order to facilitate data coding and comparison between pre- and post-study answers, only the numerical values for each answer were entered.

4.6.3   Journal Entries and Interview Data

Data collected through the journal entries and the interviews were coded and analysed through ATLAS TI, a software designed for qualitative analysis. First, the entries that had been submitted on paper were retyped. Second, all the entries on the same topic were merged so that they could be analyzed for conceptual categories. Then, individual mentors' entries were coded as follows: (a) identification of the type of data, (b) journal entry topic, and (c) alphabetical letter identifying the mentor. For example, J1_A was the entry on *Communication and motivation* written by mentor A, J2_B was the entry on *Error analysis and identification* written by mentor B and so on. Sentences are the unit of analysis for the journal entries.

Interviews were transcribed according to the transcription conventions (i.e. using different symbols, such as *italics*, [brackets], (parentheses) to convey different meanings) suggested in Mackey and Gass (2005). They were then merged into a single document and coded similarly to the journal entries. For example, I_C was the interview conducted with mentor C, and so on. Each uninterrupted utterance was the unit of analysis.

Qualitative analyses were conducted for each mentor individually in order to preserve that individual mentor's thoughts, beliefs, perceptions and decision-making process. Then, conceptual categories were identified and mentors' beliefs were related to those categories (Johnson, 1994).

4.7   Data analysis

4.7.1   Quantitative analyses

4.7.1.1 Correspondence between mentors and mentorees

The objective was to establish an association between two nominal variables, error correction type (6) and error category (13). Due to the nature of the variables, a Chi-square procedure was the initial choice to analyse the data; however, because several combinations of the two nominal variables were below the required frequency criteria to perform this analysis (i.e., 5), and there were too many such combinations to apply the Fisher's Exact procedure, a different type of analysis was needed (Hatch & Lazaraton, 1991). A log-linear statistical procedure from SAS was selected : the CATMOD (CATegorical MODel). Log-linear models are analogous to correlation analyses of continuous variables when the goal is to determine the patterns of dependence and independence among variables. This procedure is applicable to multidimensional contingency tables with two or more categories per classification of the observations (C. Fredericksen, personal communication, February 2009), and can be used to determine the association between two nominal variables in cases where their combination presents low frequency occurrences. It uses Maximum likelihood ratio tests that are particularly helpful when analyzing multiple categorical variables and large multidimensional contingency tables simultaneously (Howell, 2007). Main effects and interaction effects were considered to be significant if they obtained an alpha level of $p < 0.05$.

4.7.1.2 Questionnaires

Because it cannot be assumed that the intervals between each of the values on a Likert Scale are equal, individual Likert items were treated as ordinal data (Hatch & Lazaraton, 1991). They were analyzed using the Wilcoxon signed-rank test, a procedure similarly used by MacDonald et al. (2001) to analyze their six-point Likert scale questionnaire on beliefs relating to English language learning. The Wilcoxon signed-rank test is a non-parametric test for two related samples or repeated measurements on a single sample; it tests for before and after differences in the medians of two variables, and can be used when the population cannot be assumed to be normally distributed (Pappas, P.A. & DePuy, V., 2004). Differences were considered to be significant if they obtained an alpha level of $p < 0.05$. Only the items in Part 3 (27 statements) pertaining to beliefs about grammar and error correction were subjected to this procedure which allows for the identification of significant differences in the mentors' answers to each item, on the pre- and post-questionnaires.

4.7.2   Qualitative analyses

4.7.2.1 Questionnaires

In order to provide a finer-grained analysis of the changes in mentors' beliefs, answers to items pertaining specifically to grammar and error correction (items 8 to 31) were also subjected to a qualitative examination. *Shifts* in categories, e.g., moving from agreeing with a statement (answer 4, 5 or 6 on the scale), to disagreeing (answers 1, 2 or 3 on the scale), or vice-versa, were identified, as well as *movements* in levels of agreement and disagreement within the same category (i.e., going from 4 to 5, or 1 to 2). Shifts between agreeing and disagreeing were interpreted as a greater change in beliefs,

whereas movements within the same category indicated that the mentors' beliefs had not fundamentally changed, but had been either strengthened or weakened.

4.7.2.2 *Interviews and Journals*

Qualitative analyses of the data collected through the journals and the interviews were conducted for each mentor individually in order to preserve that individual's thoughts, beliefs, perceptions and decision-making process. In the case of the journals, four specific themes had been assigned and the mentors' feelings and perceptions regarding those issues were reported, inasmuch as they pertained to their CF behaviour during the project. As for the interviews, in an attempt to look for broader generalizations across mentors as a group, common themes were identified and categorized according to their relevance to the major issues addressed in the study.

4.8 Study Timeline

The Cyberscript project lasted approximately five months, from September 2006 to the middle of February 2007. Table 4.8 illustrates the various steps of the study, from the preparation phase through its completion with the final interviews.

Table 4.8
Study Timeline

_____

September 2006
    Tuesday, Sept. 5   First administration of the questionnaire
                                      Presentation of the Cyberscript project and its goal

    Tuesday, Sept. 12   Description of the procedures for the project and evaluation
                                        criteria for the journal entries
                                        Distribution of the email addresses of the mentorees
    Wednesday, Sept. 13 Presentation of the project to the high school learners
                                          Presentation of the project to the school principal
    Thursday, Sept. 21   Mentors send their introductory email to their mentorees
    Monday, Sept. 25   Mentorees send their introductory email to their mentors

_____

October 2006
    Tuesday, Oct. 3   Mentors reply to the mentorees' 1st message
    Friday, Oct. 6   Mentorees send their 2nd message
    Tuesday, Oct. 17   Mentors reply to the mentorees' 2nd message
    Friday, Oct. 20   Mentorees send their 3rd message
    Monday, Oct. 31   Mentors reply to the mentorees' 3rd message

_____

November 2006
    Friday, Nov. 3   Mentorees send their 4th message
    Monday, Nov. 13   Mentors reply to the mentorees' 4th message
    Thursday, Nov. 16   Mentorees send their 5th message
    Monday, Nov. 27   Mentors reply to the mentorees' 5th message
    Thursday, Nov. 30   Mentorees send their 6th message

_____

December 2006
    Monday, Dec. 11   Mentors reply to the mentorees' 6th message
    Thursday, Dec. 14   Mentorees send their Christmas greeting message
    Monday, Dec. 18   Mentors hand in their four journal entries
                                          Mentors are asked for their consent.

_____

January 2007
    Friday, Jan. 12   Second administration of the questionnaire
                                        Mentors make an appointment for the interview

    Tuesday, Jan. 23   Interviews begin (first 8 interviews are conducted)

_____

February 2007
    February 14   End of interviews (last 8 interviews are conducted)

_____

4.9   Chapter Summary

This chapter outlined the design of this mixed-method study combining both quantitative and qualitative instruments, and the research context in which it took place. Each instrument was described, and the data collection, organization and analysis procedures were thoroughly explained. The coding protocols for the types of correction and error categories identified in the correspondence between the mentors and the mentorees were detailed and the project implementation schedule was illustrated. Results of both quantitative and qualitative analyses performed on the data collected through the various instruments are presented in the next chapter.

CHAPTER 5

ANALYSES AND RESULTS

This chapter presents the analyses of the data collected through the various instruments and their corresponding results. As stated in the methodology chapter, four instruments were used to collect data: the correspondence between the mentors and the learners ("corrected texts"), questionnaires on beliefs, journals and semi-structured interviews. Data collected through the correspondence, (i.e. the corrections made by the mentors), as well as the results to the questionnaires on beliefs were subjected to a quantitative analysis and will be reported in section 5.1. Results of the qualitative analyses of the questionnaires, journal entries and semi-structured interviews will be reported in section 5.2. The profile of each mentor's feedback practices in relation to their expressed beliefs and recall of their error correction behaviour will be presented in section 5.3. Finally, this chapter will end with a summary of the results in relation to the research questions.

5.1 Quantitative Results: Corrected Texts and Questionnaires

5.1.1 Corrected Texts

This section presents the results of the descriptive and inferential analyses conducted to examine the correlation between the error correction strategies and techniques used by the mentors and the category of errors they detected. Frequency distribution of the raw data showed that four correction types accounted for 95% of all the errors detected by the mentors: direct corrections (DC), direct corrections with

comments (DCw/c), indirect corrections coded (ICC), and indirect corrections with comments (ICw/c). Therefore, the statistical analysis was performed on this sub-set of data only, using a CATMOD (CATegorical MODel) log-linear statistical procedure from SAS, version 9.13. The analysis confirmed that main effects and interaction effects were statistically significant. The likelihood ratio is exactly 0.00, which indicates that the expected frequencies exactly equal the observed frequencies and include all possible effects. Results are displayed in table 5.1.

Table 5.1

CATegorical MODel log-linear analysis

Source	df	Chi-square	p
Correction type	3	789.45	<.0001
Error category	12	591.57	<.0001
Interaction effects	35	262.22	<.0001
Likelihood Ratio	0		

The results obtained from the calculation of the raw frequencies indicate that some correction types were used more than others. Out of a total of 2,506 errors detected by the mentors, 60% were marked through direct corrections alone and 11% through direct corrections with comments. The indirect coded error correction strategy (error identification with error code or type of error spelled out) was used 17% of the time, and indirect corrections with comments, 7% of the time. The two correction types that were

not included in the statistical analyses (clarification requests and indirect uncoded corrections) because of their extremely low frequency, accounted for 3% and 2% respectively of the total number of corrections. This pattern, however, was not constant for all mentors as will be presented in section 5.3. Figure 5.1 illustrates this group correction pattern.
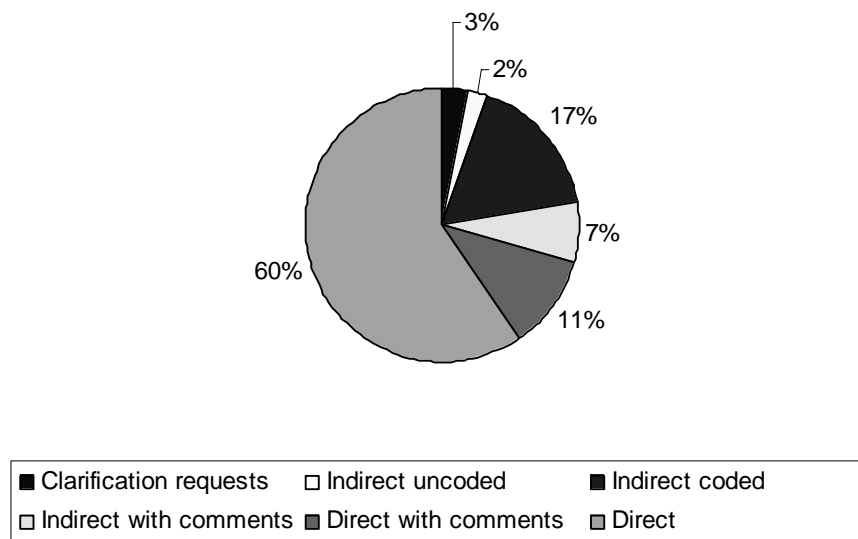
Figure 5.1. Distribution of the six correction types used by all mentors, irrespective of the categories of errors detected.

Results also show that some categories of errors were detected more than others by the mentors, as illustrated in figure 5.2.
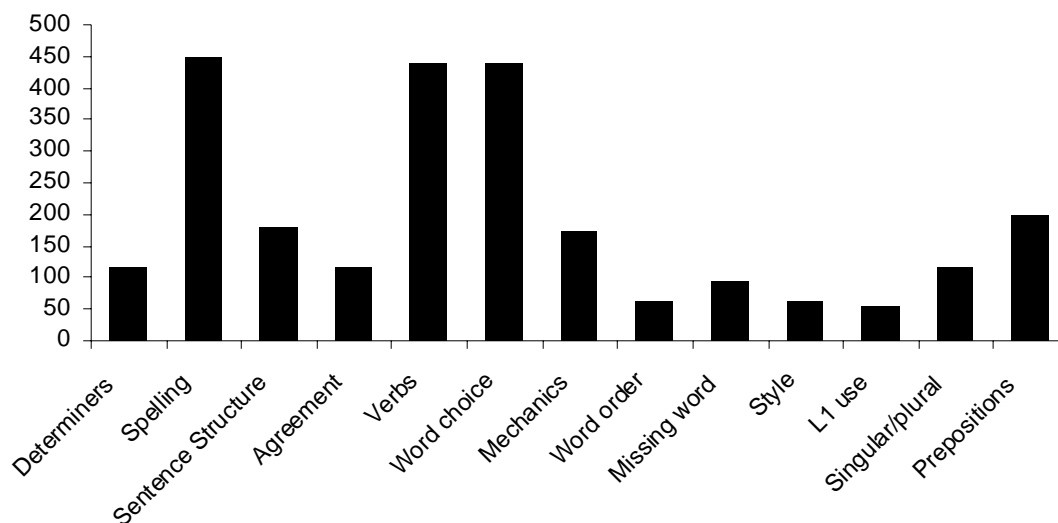
Figure 5.2. Categories of errors detected by the mentors.

Raw frequencies shown in table 5.2 indicate that three categories of errors (spelling, verbs and word choice) accounted for 53% of all the errors detected by the mentors. Other categories of errors that were marked often by the mentors were prepositions, sentence structure, and mechanics (punctuation, capitalization, etc), and accounted for 22% of the errors detected. The last quarter (25%) was distributed among the remaining seven categories of errors.

These correction choices were also constant for all mentors, as will be shown in their individual profiles in section 5.3.

Table 5.2

Category of errors corrected by the mentors

_____

Error Category	Frequency
Spelling	449
Verbs	440
Word choice	440
Prepositions	198
Sentence Structure	180
Mechanics	173
Determiners	117
Agreement	117
Noun endings	116
Missing Words	94
Word order	64
Style	64
L1 use	54

_____

The CATMOD procedure also revealed significant interaction effects between error category and error correction type. The interaction effect (χ^2 (35) = 262.22, $p < .001$), however, appears to be attributable primarily to one correction type, direct corrections. An examination of the categories of errors in association with the correction techniques showed that mentors consistently opted for direct corrections, irrespective of the error categories. Table 5.3 lists the raw frequencies for the four correction types that accounted for 95% of the corrections, associated with the 13 error categories.

Table 5.3

Frequency counts for correction types and error categories

_____

	Correction Types				
Error Categories	Direct (DC)	Direct w/comments (DCw/c)	Indirect coded (ICC)	Indirect w/comments (ICw/c)	Total
Spelling	198	36	180	15	429
Verbs	241	63	71	53	428
Word choice	267	64	52	22	405
Prepositions	138	13	35	7	193
Mechanics	119	20	13	12	164
Sentence structure	117	11	5	10	143
Determiners	83	12	4	18	117
Agreement	74	17	19	4	114
Singular/plural	74	14	9	16	113
Missing words	63	7	14	7	91
Word order	45	7	8	4	64
Style	53	5	_	6	64
L1 use	20	6	16	5	47
Total frequencies	1492	275	426	179	2372

_____

Further examination of these figures shows additional interactions between correction types and error categories. As illustrated above, the second most used correction strategy was indirect coded corrections (ICC), and this was true for almost all categories of errors. In the case of spelling errors and errors involving the use of L1, indirect coded corrections were used almost as frequently as direct corrections (DC). Exceptions to this pattern were errors of determiners, singular/plural, style and sentence

124

structure, for which the mentors used indirect corrections with comments (ICw/c) as their second choice of error correction, although this type of correction was the least used overall. Table 5.4 presents the percentage of times each correction type was used in relation to each error category.

Table 5.4

Percentage of correction types in relation to error categories

Error Categories	Correction Types			
	Direct (DC) %	Direct w/comments (DCw/c) %	Indirect coded (ICC) %	Indirect w/comments (ICw/c) %
Determiners	70.9	10.3	3.4	15.4
Mechanics	72.6	12.2	7.9	7.4
Style	82.8	7.8	0	9.4
L1 use	42.6	12.8	34.0	10.6
Singular/plural	65.5	12.4	8.0	14.2
Prepositions	71.5	6.7	18.1	3.6
Spelling	46.2	8.4	42.0	3.5
Sentence structure	81.8	7.7	3.5	7.0
Agreement	64.9	14.9	16.7	3.5
Verbs	56.3	14.7	16.6	12.4
Word choice	65.9	15.8	12.8	5.4
Word order	70.3	10.9	12.5	6.2
Missing words	69.2	7.7	15.4	7.7

As will be shown in section 5.3 where the profile of each individual mentor will be presented, some mentors diverged from the pattern of behaviour revealed by the

descriptive and inferential analyses. To further probe these differences, two variables were examined: the gender of the participants, as well as their enrollment in the *Teaching Grammar* class while they were actively involved in the Cyberscript project. As shown in Figure 5.3, the pattern of behaviour for male and female mentors was quite similar.
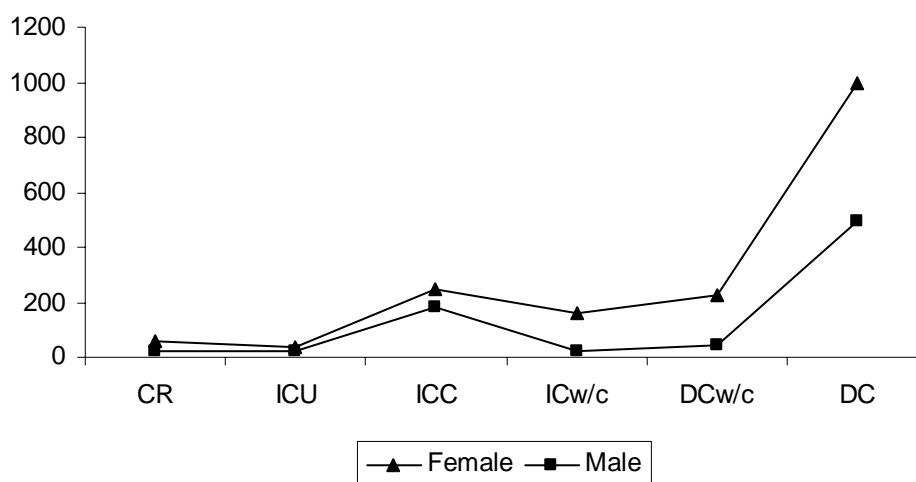
Figure 5.3 Error correction behaviour by gender.

As for the influence of the grammar class on the error correction behaviour of the mentors, it was hypothesized that the mentors enrolled in the *Teaching Grammar* class had, in all probability, made use of the knowledge gained in that class and might have adopted a different behaviour than their no-grammar counterparts. Results, however, show that the grammar mentors still favoured direct corrections, but contrary to their no-grammar peers, they also more frequently used an indirect coded correction strategy as illustrated in figure 5.4.
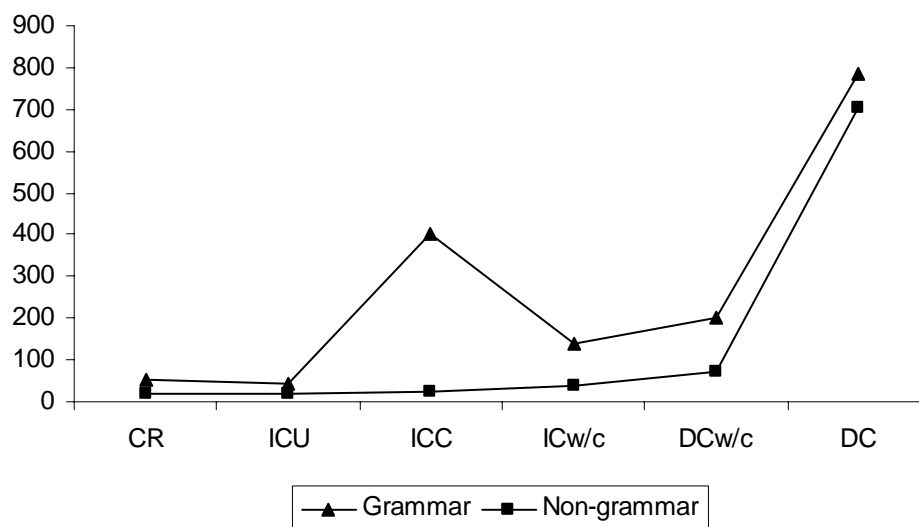
Figure 5.4 Error correction behaviour of grammar and no-grammar mentors.

In conclusion, the CATMOD log-linear analyses revealed that mentors use the direct correction strategy, either with (11%) or without (60%) comments, significantly more than other feedback strategies when providing error correction on writing to their mentorees. Descriptive and inferential analyses also show that the correction pattern adopted by the mentors is constant, irrespective of the error categories, but that two types of errors, spelling errors and errors related to the L1, generate almost as often the use of an indirect error correction strategy. Some differences were observed in individual mentors' error correction behaviour and these will be presented in section 5.3.

5.1.2 Questionnaires

Parts 1 and 2 of the questionnaire elicited biographical data about the mentors as well as information regarding their experience learning an L2 in high school. This information will be reported in section 5.2 presenting the qualitative analyses of the data.

In Part 3, every item (27 statements) pertaining to approaches to grammar and CF was analysed separately using the Wilcoxon Signed Ranks Test for dependent samples from SAS. Results showed that there was a significant change in beliefs expressed before and after the project for item 10 ($Mdn = $ -1, $Z = $ -4.38, $p < .0039$, r = -1.17) and item 31 ($Mdn = $ -1, $Z = $ -3.71, $p < .008$), as reported in Table 5.5 in Appendix H.

All mentors strengthened their beliefs that formal instruction helps learners produce more accurate language (item 10) and that explicit discussion of grammar rules is helpful for learners (item 31). However, although all individual mentors experienced some changes in their beliefs related to error correction, non-parametric statistical analyses of the pre- and post-questionnaire responses show that pre-service ESL teachers' beliefs regarding error correction did not change significantly as a result of providing error correction to learners during a four-month period.

The following section will present the results of a qualitative examination of the responses to the questionnaires (5.2.1), the narratives of the journal entries (5.2.2), and the interviews (5.2.3) conducted at the end of the project.

5.2 Qualitative Results: Questionnaires, Interviews and Journal Entries[21]

5.2.1 Questionnaires

Parts 1 and 2 of the questionnaire were administered before the project began, and were compiled to provide individual mentor profiles as well as a profile of the group. Part 3 was administered twice, before and after the project. Results obtained in each part will be presented next.

5.2.1.1 Part 1 - Information about yourself

As explained in section 4.6.1, three mentors were excluded from this group, and a fourth mentor was absent for the first administration of the questionnaire. The characteristics of the remaining 14 are shown in Table 5.6.

None of the participants were English native speakers. Their age varied from 21 to 45 and most had learned English in elementary school or at home with their parents who exposed them to English. Two participants (Nancy and Gisèle) indicated that they had not learned English in school but through regular contact with English speakers. Gisèle reported that she had never had ESL classes in either elementary or high school, and Nancy, one of the older participants, did not recall ever having had English classes in elementary school. Of the ten mentors who declared French as their native language and who all spoke English as an L2, seven had also learned a third language. As mentioned in section 4.3.1, the composition of the group, in terms of gender and linguistic profile, appears to be representative of the actual population of ESL teachers in Québec.

_____

[21] From now on, to enhance readability, mentors will be referred to by their pseudonyms.

Table 5.6

Mentors' Biographical Data

_____

Mentors	Date of birth	Age in 2006	How did you learn English?	Native language	Languages other than Eng. & Fr.	Language spoken at home
Nancy	1962	44	Social contact	French	Spanish	French
Hugo	1975	31	School	Romanian	Romanian	Romanian
Lyne	1985	21	Home	Italian	Italian	English
Nadia	1985	21	Home	French	Creole	English
Thomas	1979	27	School/home	French	Spanish	French
Joanne	1979	27	Primary	French	Creole/Portuguese	French
Victor	1977	29	School/home	French		French
Étienne	1982	24	Home	French		French
Gina	1983	23	School	French	Arabic	French
Hélène	1961	45	School	French	Spanish	French
Odette	1980	26	School	Greek	Greek	English
Nicole	1978	28	Home	Fr. & Eng.		French
Charles	1982	24	School	French		French
Gisèle	1982	24	Social contact	French	Spanish	French

_____

5.2.1.2 Part 2 : Experience learning English in high school

Items in this part referred to the teaching strategies and types of activities used by the mentors' high school ESL teachers. Mentors indicated their opinion about each statement, using a Likert-scale, consisting of six categories numbered from 1 to 6. Numbers 1, 2 and 3 expressed varying levels of disagreement with the statements, while

numbers 4, 5 and 6 expressed levels of agreement.   Gisèle, the mentor who reported not having had ESL courses in high school did not answer this section. Approximately half of the mentors agreed with the statements, while the other half disagreed, an illustration that although all the mentors, except for one, had attended high school in Quebec, the ESL classroom context in terms of grammar focus, type of activities and language spoken in class was not homogeneous. The only statement that generated a larger consensus concerned the mentors' experience with error correction.   Ten mentors out of 13 disagreed with statement 5 - *My teachers never corrected our errors in class* - and reported that their teacher had indeed corrected their errors in class.

5.2.1.3 Part 3: Approaches to grammar and corrective feedback

A qualitative examination of the responses to the 11 statements dealing specifically with error correction in Part 3 of the questionnaire indicates no group pattern in terms of beliefs. In the pre-questionnaire, each one of those items generated some responses in the "agree" and "disagree" categories, the only exception being item 17 (*Since errors are a normal part of learning, correction of grammatical errors is a waste of time*), with which all mentors expressed disagreement, albeit at different levels. On item 14 (*Teachers should correct all the grammatical errors students make*), 12 mentors out of 14 indicated agreement, but again, at different levels.

This examination also indicates that, for the most part, the mentors did not seem to hold clear or solid beliefs relating to any aspect of CF as there were very few extreme answers (i.e., 1: strongly disagree, or 6: strongly agree) to any item about error correction. Some mentors never chose these levels at all (Charles and Nancy), and others like Nadia, Nicole, Hélène, and Étienne, only selected them once or twice. On the rare

occasion when some mentors exhibited stronger beliefs (either a 1 or a 6), they did so for only one or two items. Thomas, Victor, and Odette, for example, strongly agreed that teachers should only correct some of the mistakes learners make, but their beliefs regarding other aspects of feedback were not as strong.

Gina is the only mentor who often selected an extreme category in her responses (1, strongly disagree), and her answers to the 11 statements about CF were never ambivalent as she systematically chose a level 1, a level 2, or a level 5. She strongly disagreed that all grammatical errors should be corrected and did not believe that selective error correction would lead to fossilization. Gisèle used extreme categories occasionally and, except for a few items, she generally expressed firm beliefs. Nadia, Joanne and Étienne's responses were for the most part in the "slightly disagree" or "partly agree" categories, showing that their beliefs were not yet strongly established.

As mentioned in section 5.1.2, the statistical procedure (Wilcoxon signed-ranks test) showed no significant changes in teachers' beliefs as a result of the Cyberscript project. But a finer-grained examination of the responses to the 11 statements relating to error correction revealed that some changes had occurred, for some mentors, and for some items. Indeed, there were some *changes* in categories (moving from levels of agreement to levels of disagreement on the scale, or vice-versa), as well as *shifts* in levels within the same category (moving from *slightly agree* to *agree*, for example). Changes in categories were interpreted as indicating a notable transformation in beliefs, while shifts in levels within the same category suggest that beliefs did not fundamentally change, but were either weakened or strengthened in the course of the project. In either case however, very few answers to the second questionnaire generated a response situated more than one point lower or higher on the Likert-Scale. Five mentors did not experience a

noteworthy change on any of the items related to CF. For the others, change occurred on three or four items, but those changed items were different for each mentor. A notable shift occurred in 4 of the 14 mentors in their response to item 14 (correcting all the errors or not). But their beliefs had been different to begin with, and remained so. The two mentors who had disagreed with the statement shifted to "agree" and "partly agree", and the two mentors who had agreed with the statement, shifted to "disagree." (see Table 5.7 in Appendix H for an illustration of the mentors' responses to the different items, and the changes and shifts that occurred).

However, four mentors exhibited a different pattern than discussed above. Charles and Gisèle experienced no change at all between the pre- and post-questionnaire while Nadia and Nicole experienced much greater changes than their colleagues. The beliefs expressed by Charles and Gisèle were constant and quite similar. They both agreed that content was more important than form and that teachers should not correct all the errors learners make; in addition, they were not overly concerned with possible fossilization if errors were left uncorrected. Nadia and Nicole, on the other hand, were the two mentors who seem to have experienced the greatest change between pre- and post-questionnaire as they moved from one category to the other on 6 of the 11 statements. In the case of Nadia, those changes were not very substantial, nor were her beliefs consistent, as she provided contradictory answers to statements covering the same reality before, but also after, the project. She had disagreed at first with correcting all grammatical errors, but had also agreed that not correcting would lead to fossilization. The second time she was asked to respond, she partly agreed that all grammatical errors should be corrected but slightly disagreed that not correcting them would lead to fossilization. Nicole, on the other hand, was extremely consistent but she experienced

greater changes. For example, she had totally disagreed with correcting all grammatical errors (items 14, 20 and 34), but had completely changed her mind after the Cyberscript experience.

With the exception of the two items relating to grammar and formal instruction discussed in section 5.1.2 (items 10 and 31), there was no similarity in the mentors' beliefs about various aspects of CF. Therefore, no conclusion can be drawn for the group. As for individual mentors, examination of their answers show that some changes and shifts occurred but the differences between their pre- and post-answers to the questionnaire are too minor to be interpreted as evidence that the Cyberscript project had a meaningful impact on their beliefs.

5.2.2   Journal Entries

Journal entries that were completed by the mentors during the project, and submitted at the end of December, as soon as the project had ended, were the next set of data to be qualitatively analyzed. These entries addressed the following issues: communication and motivation, the error analysis and identification pattern adopted by the mentors, the learners' reaction to feedback, and finally, some general comments about the Cyberscript experience.

5.2.2.1 Communication and motivation

In this entry, mentors discussed the motivation of the learners participating in the project, as well as their own motivation, and the challenges of providing feedback to learners they had never met personally. On that specific issue, opinions were clearly divided. Several mentors mentioned that they enjoyed the anonymity of email exchanges

for various reasons while others were not comfortable with that situation. The following

excerpts illustrate this division:

> Gina:
>
> On a final note, for me, giving feedback to a student I knew very little about, was
> beneficial in that I was not tempted to be influenced by personal factors. As we
> all know, when we get to know students, a small part of us tends to take into
> account the student's history may it be academic or personal (i.e. student Y is
> going through a hard time, student X is bilingual, etc.)
>
> Nadia:
>
> It does not bother me at all to give feedback to students I have never met.
> By not knowing the person, it is a lot less biased; there is no prejudice against a
> student for example.

Étienne also felt that this anonymity was beneficial to his own development as a

provider of CF:

> The anonymity found in emails is certainly beneficial as it allows me to reflect on
> my corrections and feedback. Communicating by email with my students not only
> makes me more comfortable with the correction procedure, but also brings me to
> be more adventurous in my comments and ideas.

Charles mentioned that far from being a negative point, the anonymity created by

the email exchanges gave him the opportunity to get to know the learners well, actually

better than some students he had been teaching during his 5-week internship:

> By reading their texts, I felt that I knew them better each time. Asking them
> questions on their texts also helped finding out about them. In some cases, I
> would say that I knew them better than students who have sat in my classroom.

On the other hand, some mentors felt that not knowing the learners affected their correction pattern since they had no way of knowing if learners understood or not their corrections, or if they even cared, as some mentors mentioned. They also felt it was difficult for them to establish a personal connection, a fact that they directly related to the mentorees' motivation, or lack thereof. The two excerpts below illustrate these points:

France:

The most difficult thing was the fact that we never met. It's hard to write to someone that you don't know and I felt that it was the same thing for them.

Odette:

On a more personal level however, I found it a little harder to provide feedback and advice to students that I have never personally met. This is due to the fact that I cannot see them and see their reactions to the feedback I am providing (if they understand or not). Also, I find that it is easier to provide more concrete feedback to someone when I am face to face with that person. Doing so via e-mail felt more mechanical and I felt that I had to provide more feedback and information in order to help them and make sure that they understood.

5.2.2.2 Error analysis and identification

On the topic of direct and indirect correction strategies, and *comprehensive* versus *selective* corrections[22], what mentors declared in their journal entries was later confirmed during their interviews. Mentors who had reported correcting everything also mentioned that fact in their journal entries, and those mentors who had chosen a selective error correction pattern also clearly indicated that in their journals. There were two exceptions, however. Nicole wrote in her journal that she corrected most of the learners' errors but declared in her interview that she had been selective in her feedback. Nancy used both

---

[22] Comprehensive correction means that all the errors are corrected, whereas selective correction refers to specific categories of errors that are selected for correction.

direct and indirect correction strategies equally but in her interview recalled having corrected directly.

In regards to the focus of feedback, 9 mentors out of 14 reported paying special attention to spelling errors and 'typos', and this corresponds to the results obtained in the quantitative analyses. Mentors also reported focusing on verb tenses, subject-verb agreement, errors due to the use of L1, word choice and prepositions. This is slightly different from what the quantitative analyses show, as errors related to the use of L1 were the least corrected category of errors with a total of 54 for the group of mentors; this low frequency was also confirmed by the individual mentor profiles that will be presented in section 5.3. Mechanics (errors of capitalization and punctuation), mentioned by only three mentors in their narratives, were actually corrected much more frequently than L1 errors by all mentors except two, Nadia and Hélène. Hugo, who reported focusing on capitalization, actually corrected only one error of this type.

Table 5.8 illustrates what the mentors wrote in their journal entries on the topic of the focus of their feedback, and the category of errors they most paid attention to.

Table 5.8

Mentors' reported focus of feedback

Mentor	Comprehensive	Selective	Focus
Nancy	X		
Hugo		X	Style, word choice, verb tenses L1 transfers, mechanics
Lyne	X		
Nadia		X	No specific category
Thomas		X	Verbs, prepositions
Joanne		X	Verbs, spelling, syntax
France	X		
Victor		X	Spelling, syntax, sentence structure
Étienne	X		Syntax, sentence structure, pronouns, adverbs
Gina		X	L1 transfers, plural s, agreement
Hélène		X	Verb tenses, pronouns
Odette		X	Verbs, spelling, L1 transfers
Nicole		X	Spelling, L1 use, word choice
Charles		X	Spelling, plural s, prepositions
Gisèle		X	Spelling, mechanics, syntax

5.2.2.3 Mentorees' reaction to feedback

Very few mentors noticed an improvement in their mentorees' writing but their determination to provide feedback was not deterred. Four mentors referred to acquisition theories to explain the lack of short-term effects of feedback (Nancy, Hugo, Thomas and Charles) on learners' accuracy. Charles mentioned that one of his mentorees was

sometimes using certain features accurately and sometimes not, a sign that meant, in his opinion that some learning was happening.   These perceptions were later confirmed in their interviews.

The lack of apparent improvement in the learners' accuracy did not compel mentors to change their CF strategies, however. Nadia, who used direct corrections exclusively, and Gina, who corrected directly most of the time, felt that their feedback strategies were appropriate and that there was no need to change. They were both selective in their error correction and accompanied these corrections with what the mentors referred to as either the *sandwich* or the *hamburger* technique learned in their *Teaching Grammar* class: one positive comment, one negative comment, one positive comment. Only one mentor, Odette, mentioned that she was going to re-examine her correction techniques because she believed that her mentorees might not have understood her corrections. And making sure learners understand the corrections was, according to Lyne, the *sine qua non* reason for providing feedback. According to her, simply correcting the errors without providing explanations was a waste of time. Étienne also felt that correcting was not enough; he provided a lot of comments that he accompanied with reformulations.   He noted that his mentorees seemed to pay more attention to the language features that he talked about in his comments than to the actual corrections on their texts.   Mentors who questioned whether the learners understood their corrections also felt that if they had been face-to-face with them, the feedback would have been more helpful. Finally, a lack of motivation on the part of the mentorees was mentioned by several mentors. The final word regarding this topic is given to Joanne:

I shattered another of my utopian dreams of teaching English and replaced it with this fact of life: You need to repeat at least twice more than you think if you want the student to have a chance of retaining what you want him/her to retain.

5.2.2.4 General comments about the project

None of the mentors reported having changed their way of looking at L2 acquisition as a result of providing feedback to learners during the Cyberscript project. Although they were unable to draw solid conclusions about the effectiveness of CF for various reasons (length of the project, unawareness of what the teacher was focusing on, lack of motivation, sporadic interactions with the mentorees), they still believed that feedback is a necessary component of the acquisition process. Some mentors (Lyne, Victor and Gina) believed that had they been the regular teacher, CF on form would have been much more effective. Gina even said that this experience modified her way of looking at L2 acquisition in that it convinced her that teacher presence and involvement is absolutely necessary. Gisèle, who also commented on the absence of face-of-face contact with learners as a possible explanation for their lack of progress, remarked that this situation was in fact no different from the school context where the ESL teacher sees the students only two or three times a week. She nevertheless believed that CF is necessary because, without it, learners would never 'realize' their errors.

Most mentors also mentioned that although their beliefs had not changed, the Cyberscript project had given them the opportunity, as noted by Thomas, "to juggle with CF" for the first time. As reported by Étienne, correcting learners' texts helped him develop "an aptitude to judge whether or not a sentence should be re-written or commented on" and helped him better evaluate the level of proficiency of learners. Still

according to Étienne, a further gain from this project was to enable the mentors to develop their writing skills aimed at motivating the learners, as well as providing explanations in a way that learners could understand better. Some mentors, especially the mentors who believed in selective error correction, also pointed out having difficulty with consistency. Odette, whose L1 is Greek, reported that the Cyberscript project brought her a better understanding of the problems Francophone learners may have with English.

The issue of time was also mentioned by several mentors. Lyne was overwhelmed by the time required to provide adequate and appropriate feedback and concluded that, in the future, she would use a correction key. Odette mentioned spending hours in her grammar books to make sure that she was providing accurate explanations. Nicole reported that not seeing much improvement in her mentorees, nor evidence of interest, had a big impact on her own motivation to spend time and effort providing feedback.

5.2.3 Interviews

Interviews were conducted with all 18 mentors, four weeks after the project ended, at the beginning of the following year's university semester. Because three mentors were excluded from the analysis for reasons discussed in section 4.6.1, results will be reported only for the 15 mentors whose names appear in table 5.6. As already mentioned, the interviews were semi-structured. At the beginning of the interview, the mentors looked at the original version of one of the mentoree's text that they had corrected and were asked to mark all the errors they found. Then, they were given that same text with the corrections they had made, and were asked to explain how they came to a decision as to how and what they would correct. Following this exercise, the

conversation moved on to a more general discussion of various topics related to CF, and to the Cyberscript project. Mentors' beliefs, perceptions and practices about CF were addressed.

Qualitative analyses of the data collected through the interviews were conducted for each mentor individually in order to preserve that individual's thoughts, beliefs, perceptions and decision-making process. In an attempt to look for broader generalizations across mentors as group, common themes were identified and categorized according to their relevance to the major issues addressed in the study. More than 30 different themes were first identified. Then, a second coding procedure led to collapsing some categories that covered similar issues and this number was reduced to 20. These topics, as illustrated in Table 5.9, were then classified in six major themes: (1) Beliefs; (2) Correction pattern; (3) Focus of feedback; (4) Challenges; (5) Impact of theoretical courses; and (6) Impact of Cyberscript.

Table 5.9

Themes and related topics addressed in the interviews

_____

Beliefs	Beliefs about CF
	Beliefs vs. evidence of effectiveness of feedback
	Prior learning experience
	Links between feedback and teaching

_____

Correction pattern	Correction strategies:
	- Direct versus indirect corrections
	Correction techniques
	- Comments
	- Explanations
	- Recasting/reformulating

_____

Focus of feedback	Comprehensive versus selective correction
	Accuracy vs. fluency
	Meaning vs. form

_____

Challenges	Feedback and proficiency levels
	Time constraints
	Types of errors difficult to correct
	Motivation
	Feelings of frustration

_____

Impact of theoretical courses	Impact of grammar course
	Impact of methodology courses

_____

Impact of Cyberscript	Impact of Cyberscript and internship experience
	Future correction pattern

_____

In the interview excerpts that anchor the presentation of the six themes listed above, the following conventions have been adopted: the initial of the mentor's pseudonym was used; the researcher/interviewer is identified by the letter R; three suspension points (…) indicate a pause in the mentor's speech and three bracketed suspension points ([…]) denote the exclusion of irrelevant information. Although the interviews were conducted in English, some mentors occasionally used French. This

choice was respected, and words and sentences in French were italicized in the transcriptions. A few chosen excerpts from the mentors' interviews will be presented to illustrate the findings for each category.

5.2.3.1 Beliefs

In answer to the question "Do you believe in corrective feedback," 13 mentors responded that they believed in CF, irrespective of whether it was effective or not in helping learners become more accurate. Most mentors also declared that, although they didn't see any progress in their mentorees, they still believed that CF would have probably been beneficial in the long term. The two mentors who were the most ambivalent about the effectiveness of CF, Joanne and France, were still determined to provide it, in the hope that it would benefit some learners.

As illustrated in the excerpts below, the reason most often cited by mentors to explain their belief in CF was their own prior learning experience and the fact that feedback was an important element of their own learning process. They also felt that they would not have learned or improved if nobody had pointed out their errors to them.

Victor :

V: Sure it helped me. Yeah. It helped me a lot. So I tend to, well if it
         helped me then and I was a good student but not that great, not that
         perfect [...] I believe yes that it, yes for sure it will help.

Gina:

R: Do you believe in corrective feedback on form?

G: Yeah I do. Well it worked for me. Yeah, I mean this is, this is how I've been taught, and it worked, so why not? Yeah, cause I've seen it with some students, I've seen it with myself and I do always use myself as inspiration cause you know that's the student that I know best and so yes I believe in it. I believe in corrective feedback and I will keep doing it because it works for some students.

Beliefs that are based on prior learning experience remained firm, even in the face of a lack of improvement in the learners, as shown in Nadia's comments below:

Nadia:

R: Have you been able to see with your students like a progression?

N: No.

R: But you still think it works. So what makes you say that it works?

N: Uh, I like to see my mistakes, so if I do something wrong and somebody is going to tell me about it and then I see the corrected version. Then I'm going to remember.

Some mentors attributed the lack of positive effect of feedback on form to their own correction feedback techniques, or to a lack of motivation on the part of the learners, as revealed in the following excerpts:

Nancy:

N: I did not notice any change in their texts; they were not better nor were they worst. Maybe I can carry the onus of this lack of improvement with my correction feedback, but I would argue more on the side of the motivation factor.

Thomas:

T: I must admit that I didn't see that much progression. But is it related to the way I corrected or the format of the activity? Where I never met the

students, I don't know what was asked of them by the teacher. What they learned.

The same two factors – motivation of the mentorees and correction pattern – were invoked by the few mentors who did report noticing an improvement in some of their mentorees' written productions over the course of the project. France attributed this improvement partly to a mentoree's motivation when writing on a topic that interested him, while Victor attributed the improvement to the selective correction technique he used with one particular mentoree.

Several mentors pointed out that one of the reasons feedback might not have been effective was due to the fact that they did not know what their mentorees' teacher had been teaching or focusing on during the course of the project. They expressed their conviction that there should be links between feedback and instruction.

Thomas:

T: It [the feedback] has to be linked to what you are teaching. And the feedback has to be linked to what they learned.

Gisèle:

G: Well, I would say that giving corrective feedback to someone when you don't know what they've learned before or what they're doing after, well it's not a waste of time, you know they benefit from it, but I think to give proper corrective feedback and actually have a bigger impact on the students, you need to take into account what they've learned so far […]
R: OK, so for you feedback must be related to instruction?
G   Yeah, I think giving feedback on something that's not being covered now, or something the students don't know, it's just like sticking a big book on top of them and it's too much.

As revealed in the interview excerpts presented above, beliefs in CF among the group of Cyberscript mentors were strong and generally based on their own prior learning

experience. In the face of contrary evidence (i.e., lack of improvement in the mentorees' accuracy), mentors invoked the following reasons: the correction technique used, an inadequacy between the feedback provided and the instruction given by the classroom teacher to their mentorees, and a lack of motivation on the part of the mentorees. But these hindering factors would not prevent them from providing CF as they feel it is a necessary component of the acquisition process.

5.2.3.2 Correction pattern

On the topic of direct versus indirect correction strategies, 8 of the 15 mentors reported using both correction strategies depending either on the type of error category or the perceived learners' proficiency level. Six mentors reported using only direct corrections but did not really explain their choice, except for Nancy who said that she corrected directly because she didn't know if the learners would have been able to self-correct as she was unaware of what the teacher had taught.[23] One mentor reported using exclusively the indirect correction strategy.

The mentors who favoured direct corrections provided these either inside the text, next to the error, or outside the text in a comment. Indirect corrections were provided through the use of codes, underlining, and colors. The mentors who used codes provided their mentorees with correction grids. Thomas and Victor attached their grids that were quite extensive, to every text they corrected. Nicole and Joanne, who only used a few codes, described them at the bottom of each corrected text. Metalinguistic explanations or comments were generally provided at the bottom of the texts, or in the introductory

---

[23] As will be seen in section 5.3.1, Nancy actually used both direct and indirect correction strategies almost equally.

message. Victor and Étienne used reformulations profusely; they would rewrite sentences and sometimes complete paragraphs. The different techniques used by the mentors are illustrated in Appendix I. Table 5.10 illustrates the mentors' reported choices of correction strategies.

Table 5.10

Mentors' reported choice of correction strategies

_____

	Error correction strategies		
Mentors	Direct corrections	Indirect corrections	Direct and indirect Corrections
Nancy	X		
Hugo			X
Lyne			X
Nadia	X		
Thomas		X	
Joanne			X
France			X
Victor	X		
Étienne	X		
Gina	X		
Hélène			X
Odette			X
Nicole			X
Charles	X		
Gisèle			X

_____

5.2.3.3 Focus of feedback

With the exception of Nancy, Lyne, France and Étienne, who reported correcting everything[24], all mentors favoured a selective correction process, based either on their own judgement of what was important or on the perceived proficiency level of the learners. The focus of their feedback, however, was different. Certain mentors focused on repetitive errors, errors that kept reappearing in their mentorees' texts. Others focused on errors that impeded meaning and some were attentive to errors that they felt would have been "easy" for the mentorees to correct, errors that were the result of a lack of attention, or that the mentors considered to be basic. Some mentors admitted paying attention to errors that bothered them personally.

Hugo:

H: […] being against the clock I chose to, at first sight what struck me most and addressed that.

Nadia:

N: I just took a few. The most important one. If I didn't understand I would re-read the sentence again and I would correct a few, let's say the verb, I would correct that and then after it would make more sense but I wouldn't correct the whole sentence.

Joanne:

J: What I decided to do was work on the little things. Things that are not obvious for them, expressions. You know idiomatic expressions. Or something like this, the prepositions, when they are not used to English.

---

[24] This affirmation was not verified as only the errors detected by the mentors were counted.

A majority of mentors commented on spelling mistakes and indicated being "annoyed" by these types of mistakes. The use of prepositions was also frequently mentioned by the mentors as a category to address. Breakdowns in communication were other instances where the mentors felt it necessary to provide corrections.

5.2.3.4 Challenges of providing feedback

A topic which emerged during the interviews concerned the challenges associated with providing feedback. One of the greatest concerns for the mentors was adapting their feedback to different proficiency levels. In general, the mentors reported having more difficulty with weaker learners, not only in terms of what to correct, but also of how to provide simple explanations for complex grammatical features. For the mentors who were intent on providing selective corrections, it was sometimes hard to isolate exactly which linguistic feature to focus on in order to help the learners improve. On the other hand, with more advanced learners who made fewer mistakes, the mentors felt that they could correct more if not all the mistakes. They also felt that the learners would probably understand their explanations better. Maintaining objectivity was also mentioned; mentors were tempted to be harsher with their weaker mentoree who made many errors, and more lenient towards their more advanced mentorees.

Nancy:

N: I think it's harder with the weaker students.
R: OK
N: Because it's a lot of work for the teacher 'cause sometimes you have to come back and come back and again and again and again and correcting, and trying not to get mad, and trying not to get mad….. And using

another technique to teach or to correct, or whatever, you now, that's a lot of efforts.

Joanne:

J: Going from one text to the other, that was difficult. And trying not use that other text as reference. That was hard. And I remember telling myself not to look at the text of the bad student but just the one I'm correcting. Because it makes you want to be harsher on the student you are correcting, on the student who has a lot to improve and lenient to the student who has plural s to correct and that's not fair.

Another challenge faced by the mentors was a fear of making mistakes themselves, of not understanding what the learners meant, or of not providing the accurate or appropriate grammatical explanation. In some cases, mentors were also afraid that if they did not correct all the mistakes, the learners would think that what they had written was accurate, and this would lead to fossilization. Finally, another challenge that was related to the inherent nature of the Cyberscript project, and that was reported in the journal entries as well, was that the mentors and the mentorees never met face to face. Some mentors found that to be an advantage as their perceptions of the learners were not tainted, while others hesitated to write negative comments for fear of hurting the mentorees' feelings.

Nicole:

N: I know that they can't correct it themselves, I would correct it, I would underline, go look at this, but I think, if I have not corrected everything I think I would let them know because I'm so scared that "I thought I had a mistake but she didn't correct it so it's OK", I'm scared of that, that's what's frightening me.

5.2.3.5 Impact of theoretical courses

A majority of mentors reported that the information they received in their *Teaching Grammar* course dictated, to some extent, the error correction behaviour they adopted with their mentorees. In this class, pre-service ESL teachers were encouraged to mark errors selectively. They were also told to reformulate, and accompany their corrections with positive and negative comments. As will be seen from the excerpts below, even if the mentors were tempted to correct everything at first, the information they acquired in their grammar class motivated them to experiment with other strategies.

Nadia:

N: […] I've used this because of grammar we had last year, it was good to put positive, negative, negative, positive. So I would give one positive two negatives then positive. But that's not the way I would correct for everything for everybody.

Gina:

G: So what I used was the same technique that we learned in teaching grammar in a second language with L which was - I basically stopped when there was a communication breakdown.

On the other hand, the mentors who were not taking the grammar class (France, Étienne and Odette) adopted a "correct-all" position.

France:

R: So how did you go about correcting the mistakes, did you correct all the mistakes?
F: I think I have.
R: Yes? That was your objective, to correct all the mistakes.
F: The ones I saw.

Étienne:

E   so I didn't get that course, but I did ask them, well like many students in their cohort, told me they don't correct everything but, I don't know…

R: What do you mean?

E: I had a hard time with that.

Although these mentors were strongly tempted to correct everything, they nevertheless experimented with different correction techniques. Étienne, for example, constantly used reformulations; rather than correct every error one by one, he would rewrite parts of the texts, and at times, even whole sentences and paragraphs. France reported changing her correction technique depending on her perception of her mentorees' level of proficiency. In some situations, she would simply indicate the mistake without correcting it. Odette, who reported being overwhelmed by the number of mistakes, tried to focus on certain types of errors so as not to discourage her mentorees.

In summary, results of the narratives show that the mentors were influenced, in varying degrees, by the information they received in their grammar course, and other theoretical or methodology courses (some mentors also mentioned the *Evaluation* course and the *Teaching writing* course).

5.2.3.6 Impact of Cyberscript

Because the interviews were conducted after the mentors had done a 5-week internship at the secondary level, it was sometimes difficult for them to tease apart the effect of the Cyberscript project from their experience with providing feedback during their internship. Even when they were questioned directly about their experience giving

feedback to their Cyberscript mentorees, they would more often than not refer to what they had done during their internship as well. It therefore appears that it is the combination of both experiences that helped the mentors define their future behaviour in regards to error correction.

Hugo:

H: I'll definitely not give the answers, I'll use an answer key. I'll try to familiarize my students with symbols.

R: Like correction codes

H: yeah, yeah, exactly (…) And ideally I would ask them to rewrite their text according to my corrections and we have a correction code maybe it will take them more effort therefore more acquisition will happen (…) I think the main thing is, I would really need to see feedback coming from them. (…) 'Cause I'm not, I don't think anyone would correct each and every mistake. So, yeah that's in conclusion what I would do. I learned that you need a follow up.

Lyne:

L: (…) I corrected everything. And I know I wouldn't do it again.

R: No?

L: No, because I think it's too much and there is a whole bunch of X's and the students are lost because they don't know left from right.

Odette:

O: That it's not always easy. And that you need to be selective. And that you have to pick the things that are more important to you but as well the things that are going to help the student as well in the future writing.

Almost every mentor mentioned that their experience with providing feedback confirmed their belief that CF should be related to instruction, and that learners should be asked to "do" something with the feedback they receive (rewrite their text, self-correct). Some also commented that even though they corrected everything with their Cyberscript

mentorees, this is not a practice they would adopt in the future. They would 'personalize" their correction strategies. Mentors also remarked that providing appropriate feedback was not easy in addition to being very time-consuming.

The journal entries and interview narratives presented above display the diversity of factors that influence the pre-service ESL teachers' choices and decisions in regards to what and how to correct.

As will be shown in the following pages, however, mentors were alike in some respects, but very different in others. The individual mentor profiles presented in the next section will illustrate some of these similarities and differences.

5.3 Individual mentor profiles

As reported in section 5.1, group analyses showed that 71% of the errors detected by the mentors were corrected through direct corrections, with or without comments. However, individual analyses indicated that this pattern of behaviour was not constant for all mentors, as illustrated in Table 5.11.

Table 5.11

Percentage distribution of corrective feedback strategies and techniques used by each mentor

Mentors	Direct Corrections		Indirect corrections			Clarification requests
	without comments	with comments	Coded	Uncoded	with comments	
Nancy	33	16	31	3	13	4
Hugo	73	16	-	3	2	5
Lyne	8	35	8	6	37	6
Nadia	100	-	-	-	-	-
Thomas	-	-	82	6	6	6
Joanne	59	3	19	-	6	13
France	83	4	1	2	8	2
Victor	37	-	52	2	7	2
Étienne	88	10	-	-	1	1
Gina	86	8	3	3	-	-
Hélène	51	34	4	1	5	5
Odette	68	13	6	6	3	4
Nicole	43	1	54	-	1	1
Charles	92	2	0	5	1	9
Gisèle	65	8	13	1	9	4

The descriptive and inferential analyses of the group's CF behaviour revealed that 71% of the errors detected by the mentors were corrected through the use of direct correction strategies. This pattern was observed in nine mentors out of 15. In this group, one mentor (Nadia,) was exclusive in her use of direct corrections. Six mentors exhibited a different behaviour. Four mentors made use of both direct and indirect correction strategies. Nancy, Lyne, Joanne and Nicole used both indirect and direct corrections strategies, almost equally in the case of Nancy and Lyne, while Nicole exhibited a slight preference (10% more) for indirect corrections and Joanne a marked preference (62%) for direct corrections. Thomas and Victor preferred the indirect correction strategy. Thomas used indirect corrections almost exclusively, while Victor used indirect corrections two times out of three.

As per the error categories that attracted the mentors' attention, statistical results showed that three main categories of errors accounted for 53% of all errors corrected – spelling, verbs and word choice. Raw frequencies of individual mentors' profile indicate that these correction choices were constant for all mentors, as illustrated in Table 5.12.

Table 5.12

Frequency count of errors most frequently corrected and percentage in relation to the total number of errors

| Mentors | Error categories | | | | |
	Spelling	Verbs	Words Choice	Total errors	% of total
Nancy	71	45	42	276	57%
Hugo	8	13	10	63	49%
Lyne	25	28	35	155	57%
Nadia	16	20	19	93	59%
Thomas	14	32	26	148	48%
Joanne	20	13	16	86	57%
France	45	42	57	289	50%
Victor	24	31	16	144	49%
Étienne	36	55	48	293	47%
Gina	22	24	18	111	58%
Hélène	15	22	35	140	51%
Odette	48	47	51	301	48%
Nicole*	48	26	31	157	69%
Charles*	37	19	19	133	56%
Gisèle	20	23	15	114	51%
Total	449	440	440	2506	

The fourth most-often marked category of error was either prepositions or sentence structure, and this was a consistent pattern for all mentors, with two exceptions. For Charles, the next most-frequently corrected category of error was subject-verb agreement, whereas for Nicole it was mechanics (capitalization and punctuation).

Results presented in the following pages will illustrate how the mentors' beliefs and their perceptions correlate with their actions, and each mentor's profile will be presented in the following order: beliefs, perceptions and actions.

The coherence of mentors' beliefs was established by examining their answers to the items in the questionnaire that related specifically to error correction and feedback pattern. Items 8, 11, 23 concerned the issue of focusing on meaning or form. Items 14, 20, and 34 addressed comprehensive versus selective corrections, and statements 17, 26 and 29 questioned whether learners' errors would fossilize if not corrected. As explained in section 4.4.2, because both positively and negatively worded items were included, a response in the "agree" category for an item worded positively (i.e. item 17) should lead to a response in the "disagree" category for a negatively-worded item (i.e. item 29) addressing the same issue. Table 5.13 shows the items that were grouped and analyzed together.

Table 5.13

Items of the questionnaire directly related to beliefs about CF

_____

Focus on form or focus on content?

Item 8 – When correcting students' written work, it is better to look at the content than to focus on linguistic accuracy

Item 11 – Teachers' feedback must focus on the appropriateness and not on the linguistic form of the students' speech

Item 23 – Teachers should only correct student errors of form which interfere with communication
_____

Comprehensive or selective correction pattern?

Item 14 – Teachers should correct all the grammatical errors students make.

Item 20 – All grammatical errors should be corrected in the students' written work.

Item 34 – Teachers should only correct some of the mistakes students make in order not to discourage them.
_____

Fossilization?

Item 17 – Since errors are a normal part of learning, correction of grammatical errors is a waste of time.

Item 26 – If grammatical errors are not corrected, this will result in imperfect learning.

Item 29 – If beginning students' errors are left uncorrected, it will lead to fossilization of errors.
_____

Perceptions will be illustrated through self-reports extracted from the interviews and the journal entries relating mentors' recollections about their error correction behaviour. A descriptive summary of each mentor's feedback pattern, as well as a breakdown of the error correction strategies used with each of their mentorees will

provide evidence of their actions. Graphs of each mentor's CF pattern were grouped and are presented in Appendix J.

Although it was impossible to establish perfect comparisons between individual mentors because every situation was different (number of mentorees, number and length of messages), an overview of the number of texts received by each mentor and the number of errors they corrected nevertheless gives an indication of their general behaviour. These results indicate that some mentors were more active correctors than others. For example, Gisèle corrected an average of 6 errors per text, while Hélène corrected an average of 9 errors per text, for almost the same number of words. Odette was the highest corrector with an average of 22 errors per text, and Nadia, the lowest, with an average of 4 errors per text. As there was no evaluation of the proficiency of each learner, the possibility that the total number of errors corrected by the mentors was related to the linguistic competency level of their mentorees cannot be ignored. However, since the mentorees were all in the same class and were randomly assigned, chances are that each mentor was paired with learners of different proficiency levels and that this variable similarly affected all the mentors.

Table 5.14 lists the number of messages received by each mentor, the number of words per message, the number of errors corrected in total and the average number of errors corrected per message.

Table 5.14

Quantity of errors corrected by the mentors

_____

Mentor	# of messages	# of words in total	# of words per message	# of errors corrected	Average # of corrections per message
Nancy	21	3 038	135	276	13
Hugo	13	1 400	109	63	5
Lyne	17	1 886	109	155	9
Nadia	22	2 744	150	96	4
Thomas	13	1177	90	148	11
Joanne	15	1495	99	86	6
France	15	2479	165	289	19
Victor	13	1289	99	144	11
Étienne	18	2302	127	293	16
Gina	15	1841	123	111	7
Hélène	16	2094	130	140	9
Odette	14	1438	102	301	22
Nicole	14	1586	113	157	11
Charles	14	1552	110	133	10
Gisèle	18	2137	118	114	6

_____

5.3.1 Nancy

Beliefs: Nancy's beliefs were neither coherent, nor consistent. She was ambivalent about whether it was more beneficial to focus on the content rather than the linguistic accuracy of the message, yet she did not feel that she should ignore errors of form. At first she agreed with the principle of comprehensive corrections, then changed her opinion, yet was not certain that she should focus only on some mistakes in order not to discourage the learners. The project seemed to have convinced her, however, that not correcting errors would lead to fossilization.

Perceptions: Nancy reported correcting every mistake. In her interview, she also reported correcting directly but her feedback behaviour shows that she used both direct and indirect correcting strategies almost equally. This is also what she wrote in her journal entry, as illustrated in the excerpt below:

> I often asked questions on the plural form of a particular word; consequently I put this kind of comment right beside the student's mistake and elicit their thought on the specific mistake. I also used some correction codes that I have developed along my education at [*the university*], during my internships and supply teaching; for example I used *(S)* for spelling. I mostly corrected the other mistakes by eliciting the students thoughts on what they wrote or recasting and rewriting their sentences, or part of their sentences. I used this type of correction because I wanted the students to reflect on their mistakes in order to enable them to find the mistakes and correct them by themselves; I wanted them to **think** instead of having me doing all the work for them! I believe this way of correcting might not always be the best way and is not applicable in every context, but in this case, with the type of texts I received, I thought it would be a good idea to do so.

Nancy's correction pattern is displayed in the following table and shows that her use of indirect and direct strategies appears to be based on her perception of the level of proficiency of her mentorees.

Table 5.15

Nancy's correction pattern

	CR	IC uncoded	IC coded	IC with comments	DC with comments	DC	Total
Mentoree 1	9	3	36	11	18	21	98
Mentoree 2	0	1	16	10	9	28	64
Mentoree 3	1	3	13	11	16	20	64
Mentoree 4	1	2	20	5	2	20	50
Total	11	9	85	37	45	89	276

5.3.2 Hugo

Beliefs: Hugo believed that the content of the message is more important than its form. His beliefs about correcting selectively were very strong, yet he also strongly agreed that not correcting errors would lead to fossilization. His beliefs, before and after the project, remained stable.

Perceptions: Hugo reported using both correction strategies depending on his perception of the proficiency level of the learners. He also reported using different techniques, as shown in this excerpt of his journal entry:

> I used a variety of correction techniques, sometimes inserting comments that gave metalinguistic explanations (like when I gave positive feedback for the correct use of the conditional), other times limiting myself to adding or erasing a letter or a particle. At times, I highlighted and explained a particular error and then I asked the student to spot other errors of the same type in his own text.

However, results from his correspondence with his four mentorees show a predominant use of the direct correction strategy.

Table 5.16

Hugo's correction pattern

_____

	CR	IC uncoded	IC coded	IC with comments	DC with comments	DC	Total
Mentoree 1	2	-	-	-	8	17	27
Mentoree 2	-	2	-	1	1	16	20
Mentoree 3	1	-	-	-	-	8	9
Mentoree 4	-	-	-	-	1	6	7
Total	3	2	-	1	10	47	63

_____

5.3.3 Lyne

Beliefs: Lyne's beliefs changed, especially in regards to comprehensive versus selective corrections. While she was a tenant of comprehensive corrections before the project, her answers to the post-questionnaire show that she later became a firm believer of correcting selectively. She was unsure about fossilization of non-corrected errors (i.e., she slightly disagreed with the statements) and this uncertainty remained.

Perceptions: Lyne reported marking everything and always accompanying her corrections with explanations, irrespective of whether she corrected the error herself or encouraged the learner to self-correct. This is evident in her pattern of correction. Lyne

also reported varying her strategies depending on the proficiency level of the learners, as well as their gender, because she felt that the girls were almost bilingual and seemed more interested than the boys (Mentorees 1 and 2 are the boys).

> The girls are taking this a lot more seriously than the boys […] As for the two boys, there is one that right from the start has not been showing any interest. The other has been showing interest since the start but for the mistakes I pointed out, no difference whatsoever.

Lyne's correction pattern was slightly different for S3 for whom she corrected fewer mistakes and used mostly direct corrections. According to Lyne, this learner was the most proficient of her four mentorees.

Table 5.17

Lyne's correction pattern

	CR	IC uncoded	IC coded	IC with comments	DC with comments	DC	Total
Mentoree 1	3	3	4	19	18	4	51
Mentoree 2	-	2	3	13	14	5	36
Mentoree 3	-	-	2	7	16	-	25
Mentoree 4	3	1	0	21	17	1	43
Total	6	6	9	60	65	9	155

5.3.4 Nadia

Beliefs: Nadia remained firm in her belief in focusing on the content of the message, rather than its linguistic form, but her responses to other statements were contradictory and remained so.   At first, she felt that not every grammatical error should be corrected, yet believed that not correcting errors would lead to fossilization. After the project ended, she was a proponent of correcting more grammatical errors, but she was no longer firm in her belief that fossilization would occur if errors were left untreated.

Perceptions: Nadia reported correcting selectively through the use of direct corrections and her practices confirm that.   She was also consistent with all her mentorees. Nadia gave her reasons for not correcting everything in her journal entry:

> I never correct all of their mistakes because then, their email would be filled with red marks and corrections. […] It is supposed to be a good experience for them. Having red marks everywhere could make them think that they are not good enough. I correct mistakes that are repetitive.

Nadia also mentioned that her four mentorees' English was quite advanced and that they were relatively at the same proficiency level. She reported being selective in her correction pattern and choosing some mistakes that were recurrent. She also had the lowest error correction average per text.

Table 5.18

Nadia's correction pattern

	CR	IC uncoded	IC coded	IC with comments	DC with comments	DC	Total
Mentoree 1	0	0	0	0	0	17	17
Mentoree 2	1	0	0	0	1	30	32
Mentoree 3	0	0	0	0	0	23	23
Mentoree 4	0	0	0	0	0	24	24
Total	1	0	0	0	1	94	96

5.3.5 Thomas

Beliefs: Thomas believed in focusing on meaning rather than form, favoured selective corrections and disagreed that not correcting errors would be detrimental for the learners. His beliefs were strong and remained unchanged.

Perceptions: Thomas reported never directly correcting the learners' mistakes and consistently using indirect corrections with codes. Table 5.19 shows that his recollections were accurate since only 5 mistakes out of 148 were corrected directly. Thomas also used reformulation, but outside the learners' text, without mentioning that he was actually providing them with a correction, as he explains in this interview excerpt:

> No, I never corrected their mistakes. But I gave suggestions in a little text afterwards. And sometimes I would write a sentence, let's say they talk about going Cuba, they say I would like to be going for Cuba (…) What I would write is, yeah, me too I would like to go to Cuba. Kind of a recast sort of, without telling them. I know it's not the most efficient way to correct but I say like, I'm not going to tell them everything and overwhelm them with corrections.

Table 5.19

Thomas's correction pattern

	CR	IC uncoded	IC coded	IC with comments	DC with comments	DC	Total
Mentoree 1	2	2	30	2	0	0	36
Mentoree 2	1	2	35	2	0	0	40
Mentoree 3	1	0	10	0	0	3	14
Mentoree 4	4	3	44	5	0	2	58
Total	8	7	119	9	0	5	148

5.3.6 Joanne

Beliefs: Joanne was ambivalent about focusing on meaning rather than form. She agreed with selective corrections but was not certain that not correcting everything would benefit her mentorees. Joanne's uncertainties remained.

Perceptions: Joanne reported using both correction strategies, depending on the type of mistakes. For example, she would underline mistakes with plural 's' but would directly correct idiomatic expressions. Her pattern shows that she used direct corrections most frequently, and this pattern remained constant for all her mentorees. Joanne also reported being selective in her corrections and chose to focus on verb use, spelling and syntax. She also indicated overlooking some errors because they were too difficult to explain:

> Of course there were times where I didn't know what to correct. For example how do you correct syntax? I just underlined the whole sentence, wrote a

comment, a questions mark. How do you do that?   It was difficult. I had problems at the beginning with the syntax of some texts. And towards the end I would say re-read your text, break it down.

The figures below tend to support this affirmation since Joanne's error correction frequency is one of the lowest (an average of 6 errors per message).

Table 5.20

Joanne's correction pattern

	CR	IC uncoded	IC coded	IC with comments	DC with comments	DC	Total
Mentoree 1	4	0	6	2	1	18	31
Mentoree 2	0	0	3	3	2	13	21
Mentoree 3*	0	0	2	0	0	4	6
Mentoree 4	0	0	7	1	2	18	28
Total	4	0	18	6	5	53	86

* S3 wrote only one message.

5.3.7 France

Beliefs: France did not complete the second questionnaire but her responses to the first showed that she slightly disagreed with focusing on meaning at the expense of form. She favoured comprehensive corrections and strongly agreed that errors left uncorrected would lead to fossilization.

Perceptions: Irrespective of her expressed beliefs, France reported being selective in her correction pattern, as indicated in this excerpt from her journal:

For this project, I had 3 students who were at completely different levels in written English. I had one fully bilingual student, one who was a just-above average student and one who I think is not a bad student but who didn't demonstrate any interest in this project which led to a lot of errors in his texts. Since these 3 students were at different levels, I had to focus on different types of errors for each of them.

She also reported using both strategies depending on the learners. Yet, her correction pattern shows that she favoured direct corrections for all of them, irrespective of what she perceived their proficiency levels to be.

France was the second most active corrector with an average of 19 errors marked per message. With S2 who was fully bilingual according to France, she corrected fewer mistakes, but this mentoree also wrote one message less than the others.

Table 5.21

France's correction pattern

	CR	IC uncoded	IC coded	IC with comments	DC with comments	DC	Total
Mentoree 1	2	2	1	10	5	107	127
Mentoree 2	0	0	0	0	0	66	66
Mentoree 3	3	0	7	18	2	66	96
Total	5	2	8	28	7	239	289

5.3.8 Victor

Beliefs: Victor was slightly ambivalent about the need to focus on form or meaning, but was clearly in favour of selective corrections and this belief remained unchanged. His belief that not correcting errors would lead to fossilization was a little stronger in the post-questionnaire.

Perceptions: Victor reported correcting directly, mostly through reformulating the text written by the learners. The pattern shows, however, that he used an indirect correction strategy slightly more often. He also reported being selective in his correction pattern. Similarly to Thomas, Victor used reformulations in his introductory message to the mentorees but not directly in the text.

> Finally, the corrective feedback techniques I used were quite diversified but constant. First, I always wrote my own version of the text they had to write using most of their errors in the correct and proper form. Secondly, I used the "suivi des modifications" or "commentaires" tools in order to show them where their errors were. Sometimes I provided the right answer but, most of the time it was simply to pinpoint and underline where they were wrong and the usefulness of a correcting grid system.

Table 5.22

Victor's correction pattern

	CR	IC uncoded	IC coded	IC with comments	DC with comments	DC	Total
Mentoree 1	1	1	22	3	0	16	43
Mentoree 2	2	1	28	3	3	24	61
Mentoree 3	2	3	13	2	5	15	40
Total	5	5	63	8	8	55	144

5.3.9 Étienne

Beliefs: Étienne believed that errors left uncorrected would lead to fossilization. His contradictions were apparent, though, on the topic of comprehensive versus selective corrections as well as focusing on meaning rather than form, and these contradictions persisted.

Perceptions: Étienne reported correcting all the mistakes, and these perceptions are coherent with his practices. Étienne's average number of corrected errors per text was quite high (19) and his total number of errors corrected was the second highest.

> For each of my students' texts, I corrected most of their errors. […] I felt that providing them with the right answer gave them an example to look up to for previous writings. Of course, the best way for me to help my students with certain writing mistakes would be to have them perform related language tasks. […] written feedbacks as well as correcting important errors are the most suitable ways to help my students improve in their writing.

Table 5.23

Étienne's correction pattern

	CR	IC uncoded	IC coded	IC with comments	DC with comments	DC	Total
Mentoree 1	1	0	0	1	9	82	93
Mentoree 2	1	0	0	0	9	109	119
Mentoree 3	1	0	0	0	9	71	81
Total	3	0	0	1	27	262	293

5.3.10 Gina

Beliefs: Gina strongly believed that she should focus on meaning, but was slightly less convinced of that after completing the project. She definitely favoured selective corrections and her belief that not correcting grammatical errors would not be detrimental was very strong. These beliefs remained firm.

Perceptions: Gina reported correcting selectively through the use of direct corrections and this pattern was confirmed by her error correction behaviour. She focused on certain recurrent mistakes and ensured consistency by revising the previous messages sent by her mentorees so that she could address the same error categories. The following excerpts from her interview and her journal entry illustrate this:

> [Interview]
> Yeah `cause like I said I would open all the windows like on my computer of what they had done, and see, OK is it me or is it them, or is it like, what's going on, you know, if I can prevent something from recurring all the time, I'd like to do that so that's where I changed a little bit.
>
> [Journal entry]
> I used selective feedback and truly tried to focus on each mentoree's specific need. Moreover at the end of each text, I included suggestions and comments using examples from the student's text. I also looked for demonstration of understanding of these suggestions and comments in later texts.

Table 5.24

Gina's correction pattern

	CR	IC uncoded	IC coded	IC with comments	DC with comments	DC	Total
Mentoree 1	0	1	1	0	3	33	38
Mentoree 2	0	1	0	0	3	35	39
Mentoree 3	1	0	0	0	2	31	34
Total	1	2	1	0	8	99	111

5.3.11 Hélène

Beliefs: Hélène was coherent and consistent in her beliefs that she should focus on meaning and use a selective correction process. However, after completing the project, she was convinced that not correcting grammatical errors could lead to fossilization.

Perceptions: Hélène reported being selective and using both strategies but her correction patterns reveals otherwise. More than 80% of her corrections were direct – with or without comments. Different patterns for her three mentorees were revealed, in terms of number of errors corrected and choice of feedback strategy. Hélène used more direct corrections with S1 than with her two other mentorees and she recalled overlooking more mistakes for the boy because he was weaker (S3). Her correction strategy was also different in that she gave comments on the content first, then would copy the original text on another page and would provide her corrections, as shown in the

following example (Hélène's comments on content are in italics and her corrective feedback is underlined)

I'm a bit late... Sorry! *Better late than never*! I had to send this e-mail on Monday, but my grandmother died this day and I didn't have time to send it. *Sorry to hear that; my condolences.* Don't worry, I'm fine...! *Hope you keep great memories of her.*

Hi! I'm a bit late... Sorry! I had to send this e-mail on Monday, but my grandmother died **(this) on that** day and I didn't have time to send it. Don't worry, I'm fine...!

Hélène explains why she proceeded this way in the following excerpt of her journal:

My corrective feedback techniques are in my opinion positively encouraging. I answer the students' emails first without correcting anything at all; just pure corresponding which to me, makes the whole thing more real, inviting for the students and more humane in a way.

Table 5.25

Hélène's correction pattern

	CR	IC uncoded	IC coded	IC with comments	DC with comments	DC	Total
Mentoree 1	6	2	2	4	20	42	76
Mentoree 2	1	0	2	1	12	10	26
Mentoree 3	0	0	1	2	16	19	38
Total	7	2	5	7	48	71	140

5.3.12 Odette

Beliefs: Odette agreed that she should focus on meaning but disagreed with comprehensive corrections and thought that not correcting grammatical errors would be detrimental to the learners. Her beliefs did not waver.

Perceptions: Odette reported using both strategies depending on the type of error. She started by correcting everything but then tried to focus on the mistakes she felt were more relevant and pertinent to each mentoree. Her correction pattern reveals a preference for the direct correction strategy, however. She had the highest number of mistakes corrected, and the highest average of errors corrected per text. A closer examination of the texts she received shows that she corrected nearly all the mistakes, which contradicts her affirmation that she believed learners would benefit more by self-correcting:

> In the extent to which it was possible, I tried not to correct their errors for them. I wanted them to reflect on the information I provided and make their own choice as to what they would consider or what to discard.

Table 5.26

Odette's correction pattern

	CR	IC uncoded	IC coded	IC with comments	DC with comments	DC	Total
Mentoree 1	3	12	12	2	17	91	137
Mentoree 2	10	4	6	5	23	95	143
Mentoree 3*	0	1	0	2	0	18	21
Total	13	17	18	9	40	204	301

* S3 only wrote two messages.

5.3.13 Nicole

Beliefs: Nicole experienced the greatest change in beliefs concerning comprehensive versus selective corrections. Contrary to what she expressed in the pre-questionnaire, after completing the project, she felt that teachers should correct all the grammatical errors learners make, and her belief that not correcting them would lead to fossilization was strengthened. Yet she also agreed that she should focus on content rather than linguistic accuracy.

Perceptions: Nicole reported using both strategies depending on the category of error and this is confirmed in her correction pattern which shows an almost equal use of both strategies, with a slight preference for the indirect strategy.

Table 5.27

Nicole's correction pattern

	CR	IC uncoded	IC coded	IC with comments	DC with comments	DC	Total
Mentoree 1	1	0	21	1	1	11	35
Mentoree 2	1	0	28	0	0	15	44
Mentoree 3	0	0	36	0	0	42	78
Total	2	0	85	1	1	68	157

5.3.14 Charles

Beliefs: Charles's beliefs were coherent and consistent. He agreed that he should focus on meaning; he favoured a selective correction process and he did not believe that

not correcting grammatical errors would be detrimental to learners. Those beliefs

remained stable as his answers to the pre- and post-questionnaires were similar.

Perceptions: Charles reported using direct corrections and this is confirmed in his

correction pattern. He also reported correcting selectively, starting with all the spelling

errors and typos, and then what he considered to be the major mistakes in each text.

Charles explains why he focused on spelling errors in his journal entry:

> First of all, I would like to address the problems that students have with typos.
> This was something that I corrected all the time because I was annoyed by all
> the mistakes that the students could have avoided easily. If they had reviewed
> their text before sending it, they would have seen all of the mistakes that they
> had made. Even though this might not be considered a real mistake, I believe
> that showing students the importance of revising their texts before handing them
> in is important.

Table 5.28

Charles' correction pattern

	CR	IC uncoded	IC coded	IC with comments	DC with comments	DC	Total
Mentoree 1	0	2	0	1	1	41	45
Mentoree 2	0	3	0	0	0	33	36
Mentoree 3	0	2	0	0	1	49	52
Total	0	7	0	1	2	123	133

5.3.15 Gisèle

Beliefs: Gisèle agreed that she should focus on meaning and was strongly in favour of selective corrections. She did not believe that not correcting errors would lead to fossilization. Her beliefs remained stable as her responses to the post-questionnaire do not indicate any noteworthy change.

Perceptions: Gisèle reported using direct corrections at first but changing her pattern to include more indirect corrections, as noted in her journal entry:

> At the beginning I would simply write the right form and sometimes give an explanation in the form of comments. As time went by however, there are some words that I simply highlighted and told the students there was a spelling or verb error. As for sentences that were hard to understand, I would simply leave a comment saying»: "I'm not sure I understand, could you write this in another way?"

Her correction pattern, however, shows that more than two-thirds of her corrections were direct, with and without comments.

Table 5.29

Gisèle's correction pattern

	CR	IC uncoded	IC coded	IC with comments	DC with comments	DC	Total
Mentoree 1	2	0	3	0	1	23	29
Mentoree 2	3	0	5	5	4	16	33
Mentoree 3	0	1	4	4	1	21	31
Mentoree 4	0	0	3	1	3	14	21
Total	5	1	15	10	9	74	114

5.4   Results and Research Questions

This mixed method study attempted to provide a picture of the error correction feedback practices adopted by pre-service ESL teachers through an investigation of the error correction strategies and techniques they employed with grade 9 (*secondaire 3*) high school learners, and how congruent these practices were with their beliefs and perceptions about error correction. Answers to the research questions will be interpreted and discussed in chapter 5. Results are summarized below.

First research question: What strategies and techniques do pre-service ESL teachers use when providing CF on writing? Results of the descriptive and inferential analyses presented in this chapter indicate that pre-service ESL teachers use direct corrections significantly more often than any other types of strategies when providing error correction on writing to their learners.

Second research question: Is there a correlation between the CF strategies adopted by the pre-service ESL teachers and the categories of error made by the learners? Results show that the correction pattern adopted by the mentors stands, irrespective of the error categories, but that two types of errors, spelling errors and errors related to the use of L1, generate almost as often the use of an indirect error correction strategy. Some differences were observed in individual mentors' error correction behaviour.

Third research question: To what extent are pre-service ESL teachers' beliefs about error correction congruent with their error practice? Results of the questionnaires, journal entries, and interviews show that practices are not always congruent with expressed beliefs and perceptions of actual practices, and that the beliefs themselves are neither always clear nor consistent.

Fourth research question: Did pre-service ESL teachers' beliefs change as a result of having provided CF to learners over a high school semester? Results of the inferential analyses of the questionnaires showed that there were no significant changes in teachers' beliefs as a result of the Cyberscript project. Descriptive analyses of the answers to statements specifically relating to error correction, as well as the interview and journal entry narratives, indicated however that several mentors experienced some degree of change in their beliefs.

5.5   Chapter Summary

This chapter presented descriptive and inferential analyses of the data elicited by the various data collection instruments: correspondence between the mentors and the high school learners, questionnaires administered before the Cyberscript project began and again after it ended, journal entries submitted at the end of the project, and interviews conducted at the beginning of the following semester. Results reported in this chapter will be interpreted and discussed in chapter 6.

CHAPTER 6

DISCUSSION

This chapter focuses on the interpretation and discussion of the results obtained from the descriptive and inferential analyses of the data presented in the previous chapter. Results to the two research questions about the mentors' choices of CF strategies and techniques will be discussed and analysed in terms of their congruence with the findings of previous teacher feedback research. Then, the mentors' actions and their perceptions about their CF behaviour will be examined and compared to their expressed beliefs. Results will then be considered in light of the findings of previous research on teacher cognition conducted with pre-service second or foreign language teachers.

6.1 Choice of corrective feedback strategies and techniques

The first question asked what strategies and techniques pre-service ESL teachers used when providing error correction on writing. Results from the descriptive and inferential analyses showed that mentors, as a group, relied primarily on direct correction strategies to mark their learners' errors. In fact, more than 70% of all errors overall, irrespective of their categories (lexical, grammatical, syntactic), were treated through direct corrections. These findings corroborate the results of recent investigations into teacher feedback also showing an overwhelming reliance on direct feedback strategies. The group of experienced and inexperienced teachers investigated by Lee (2004) adopted direct correction techniques more than 70% of the time, and over half of the errors in

Furneaux, Paran and Fairfax's (2007) study were marked through direct corrections. Ferris (2006) also found that teachers applied direct corrections frequently although they had been specifically asked to use indirect corrections.

Results also indicate that indirect coded corrections were the mentors' second most favoured CF strategy, amounting to 17% of the total number of errors corrected. Examination of individual mentors' CF behaviour revealed, however, that this had not been the case for every mentor. It was therefore hypothesized that perhaps these disparities were due to the mentors' training. As previously stated, during that semester, a majority of mentors were registered in a grammar class in which they were strongly encouraged to bring their learners to self-correct; they were also advised to do selective corrections and avoid overcorrecting in order not to demotivate their mentorees. A comparison between the mentors who had taken the grammar class while they were actively participating in the Cyberscript project, and the mentors who had not, showed that, indeed, the grammar-class mentors made use of indirect correction strategies significantly more frequently than their no-grammar class peers. But further examination of the grammar mentors' profile revealed that they seemed to have been selective in choosing which of their grammar instructor's recommendations to follow, since the recourse to indirect corrections was attributable to a few individuals only. Although most mentors in that group opted for selective corrections, with the exception of Nancy and Lyne, only half heeded the call of their grammar instructor to use indirect corrections. Out of this group, six mentors (Hugo, Nadia, Gina, Hélène, Charles and Gisèle) almost never used indirect feedback strategies, and five used indirect corrections approximately half the time (Joanne, Nicole, Victor, Lyne and Nancy). Thomas was an anomaly as he was the only one to employ indirect correction strategies exclusively. He used correction

codes, and although he conceded that his codes were at times too vague, he mostly used them to make sure the errors would stand out. He was convinced that the learners would not take the time to read long-winded comments, but that the ones who were really committed to improving their English would invest whatever time and effort necessary to self-correct., hopefully leading to improvements in their writing.

As shown in several studies on teacher cognition, training activities do not necessarily lead to changes in teachers' practices. Mok (1994), who investigated the perceptions of experienced and inexperienced ESL teacher-trainees, found that classroom experience was a stronger predictor of change than theoretical courses, even when those were supplemented by more practical activities. Had the mentors in this study had the opportunity to do their internship with high school students before doing the Cyberscript project, they might have been more inclined to follow the theory learned in their grammar class. In fact, most mentors mentioned during their interview that, in their future career, they would not adopt the same feedback behaviour they had used with their Cyberscript mentorees. It appears that daily face to face contact with the reality changed their perspectives and led them to reflect on their practices, more so than the knowledge imparted in their theoretical classes. Thomas, the only mentor who actually implemented all the recommendations suggested by the grammar instructor, was the only one who declared that, in his future career, he would adopt exactly the same feedback practices he had used with his Cyberscript mentorees. The three mentors who had not taken the grammar class (Étienne, France and Odette), on the other hand, provided direct corrections almost exclusively and they were the most active correctors as well, with the highest number of errors corrected per text. But, like their peers from the grammar

group, they commented that their internship experience had shown them that correcting every error and providing the correct form might not be the best strategies to adopt.

The next most frequently used CF strategies were direct corrections with comments and indirect corrections with comments. Taken together, those corrections amounted to 19% of the total number of errors marked. In fact, feedback with metalinguistic explanations, irrespective of whether the error was corrected or not, was used slightly more often than indirect coded corrections. Providing adequate explanations for their corrections was an issue that the mentors addressed frequently in their interviews. Most mentors expressed that giving the correct answer was useless if the learners did not understand why they made an error. On the other hand, they also added that providing accurate metalinguistic feedback had been a real challenge, which perhaps explains why, although they were convinced that learners needed explanations for their errors, most of the mentors used those strategies very rarely (between 8 and 15% of the time). Mentors explained that their reluctance to provide explanations was due to the use of email as the mode of communication with their mentorees. If they had had a visual contact with them, they could have verified their comprehension and they would have been more inclined to provide explanations and examples. They could also have insisted that their mentorees correct their errors and resubmit their texts. But three mentors at least – Lyne, Nancy and Hélène – were not deterred by this lack of face to face communication with their mentorees. Lyne accompanied all her corrections, direct or indirect, with metalinguistic explanations. At first, she had thought of using a correction key. Yet, because she did not know what the ESL teacher was focusing on in class, nor did she want to confuse the learners, she decided to explain everything, hoping that they would understand their errors and not repeat them. Likewise, Nancy and Hélène were

frequent providers of grammatical explanations; they were also the ones who showed the most diversity in their choice of feedback strategies. Perhaps this is partly explainable by their personality, age, and previous experience. Both were mature women who had already had some teaching experience. Nancy was a mother of four who mentioned during her interview that she was teaching the way she was mothering: through guiding, explaining and modeling. Hélène reported thriving on feedback; for her, it was also a question of respect to interrelate on a personal level with her mentorees first and, second, to make sure they understood their errors. Time was not an issue for either of them. They were both very passionate about their teaching career and were willing to put in all the hours necessary to fulfill their obligations as a professional. Also, their perspective on being a teacher went above and beyond simply teaching an L2. They saw themselves as role models, and they were very conscious of the impact they could have, through their actions, on young people's lives.

Finally, the least used correction strategies were clarification requests and indirect uncoded corrections. Those two strategies accounted for 3% and 2%, respectively, of all errors corrected. As defined by Lyster and Ranta (1997), a clarification request is an indication of alleged incomprehension and is usually manifested by asking a question about what the learner meant. In Cyberscript, when the mentors demonstrated their incomprehension, they were usually very specific about what they did not understand. Because those instances were frequently related to errors of form, the mentors would provide the mentorees with clues about the problem. Therefore, such instances were categorized as direct (if the correct form was provided) with or without comments, or indirect coded or with comments (if the correct form was withheld). It was only when the mentors were truly bewildered, and addressed specifically the meaning of an

utterance, that their questions were categorized as clarifications requests, as in the following example (the mentor's comments are in italics):

and we go to give *(we will give)* the candies on the new rowboat of my father, it goes to have a lot of fish on the soil *(Sorry, I do not understand what you mean...* ☹*)* *(A1.3)*

There were few such instances because, as the mentors remarked during their interviews, they could usually very well understand what the learners meant, even when the sentence structure was completely incorrect. Errors related to L1 (direct translations or transfers) were also easily understandable by the mentors who shared the same native language.

As regards to indirect uncoded corrections, these were mostly used when the same error was repeated in a learner's text, but had already been coded or explained by the mentor, as in the following example: I don't have <u>one other</u> brother and <u>a other sister</u> *(C1.1).* The mentor corrected the first instance by changing "one other" to "another", but she simply indicated the mistake for "a other sister" by highlighting it in color. During the interview, mentors mentioned that when the same error occurred several times in the same text, they would usually signal, or correct, and explain the first occurrence, and then would simply underline other similar errors. The indirect uncoded correction technique seems to have been used essentially for that purpose. As most mentors noted, learners cannot be expected to correct their errors if they do not know what those are, or do not understand the grammatical rules. Therefore, simply underlining a mistake is only helpful if the learners know exactly what the teacher is focusing on. An issue that almost all mentors addressed was their belief that feedback must be related to instruction. If it is,

learners can be told that the teacher's corrections will focus specifically on the linguistic features that were the target of instruction, and then it would make more sense to use indirect uncoded corrections. Nancy and Thomas reported doing that systematically during their internship; Nancy, with past tense, and Thomas with conditional sentences and modals, because those specific features had been the focus of instruction in their classroom at that time. In Cyberscript, though, the mentors did not know what the ESL teacher had been focusing on during the course of the project, or had been teaching up until then. It also took some time for the mentors to assess the level of their mentorees, and to judge what they would be capable of self-correcting without guidance. This might explain why indirect uncoded correction was the least used correction strategy.

Finally, although this was not specifically a research question, an interesting finding relates to the mentors' choice of selective or comprehensive corrections. As mentioned earlier, the mentors who had taken the grammar class were repeatedly told that they should not correct every error. Two mentors, however, chose to ignore the recommendation of their grammar-class instructor and corrected comprehensively. Their reason for doing so was their fear that if they did not correct, the mentoree would think that it was accurate. The determination of these two mentors (who were also the most frequent users of corrections with comments) to ensure that learners understood their errors was constant throughout the project. Although their answers to the post-project questionnaire show that they changed their perspectives and no longer believed that correcting every error was necessary, they were still concerned about possible fossilization of non-corrected errors. This contradiction was also observed with some mentors who chose a selective correction pattern. Hugo, for example, who adopted a selective correction pattern, was still convinced, at the end of the project, that non-

corrected errors would fossilize, and so were Victor, Hélène and Nicole. In that respect, beliefs and practices did not coincide. This issue will be addressed further in section 6.3, when discussing the congruence of mentors' beliefs, perceptions and actions.

Furneaux, Paran, and Fairfax (2007) identified six different roles[25] teachers assume when providing feedback to their learners: initiator, advisor, provider, supporter, suggester, and mutator. They referred to teachers who provided direct corrections as providers, and those who only signalled an error, without providing the correct form, as initiators. In their typology, however, the roles of provider and initiator included the provision of grammatical explanations. In Cyberscript, as it frequently occurred that mentors added metalinguistic explanations, with or without the actual correction, a distinction was made between direct corrections with comments (grammatical explanations, suggestions or comments) and indirect corrections with comments, in order to capture different feedback behaviours. The mentors who accompanied their corrections with explanations will be referred to as *provider-instructors* if they provided the correction or *initiator-instructors* if they used indirect correction strategies, in order to distinguish them from the mentors who provided corrections only, without comments.

The four roles characterized by Furneaux et al. (2007) that were found to occur in the present study were those of provider, initiator, suggester and instructor. While most mentors clearly assumed one role or the other, some adopted binary or multiple roles. As in Furneaux et al., however, the provider role was the most prevalent with more than half of the mentors being unambiguous providers, although at varying degrees. At opposite ends of the continuum, there is Nadia, who was the absolute provider, and Thomas, the absolute initiator. Étienne, Gina, Charles, and Hugo were unequivocal providers, with

_____

[25] A description of these roles is provided in section 3.3.1.

more than 90% of their mentorees' errors treated through direct corrections, as well as France, Hélène and Odette, with more than 80%. Gisèle and Joanne were also mostly providers who at times assumed the role of initiators, while Nicole, Lyne, Victor and Nancy maintained an almost equal balance between the roles of provider and initiator.

Some mentors assumed complementary roles; Hélène was a provider-instructor who accompanied almost half of her corrections with comments and metalinguistic explanations. Étienne was a provider-suggester *par excellence,* as he provided most of his corrections through reformulations, by suggesting a better alternative above or below the uncorrected original. Victor was an initiator who was also a suggester, but this was unbeknownst to his learners, as his reformulations were hidden in an introductory message preceding the corrections. Lyne was a provider-initiator-*cum*-instructor as she accompanied all her corrections, direct or indirect, with comments and explanations. Nancy presents the most complex, and balanced, teacher profile as she assumed multiple and binary roles: provider, initiator, suggester and instructor. Figure 6.1 illustrates the continuum of mentors' CF behaviour.

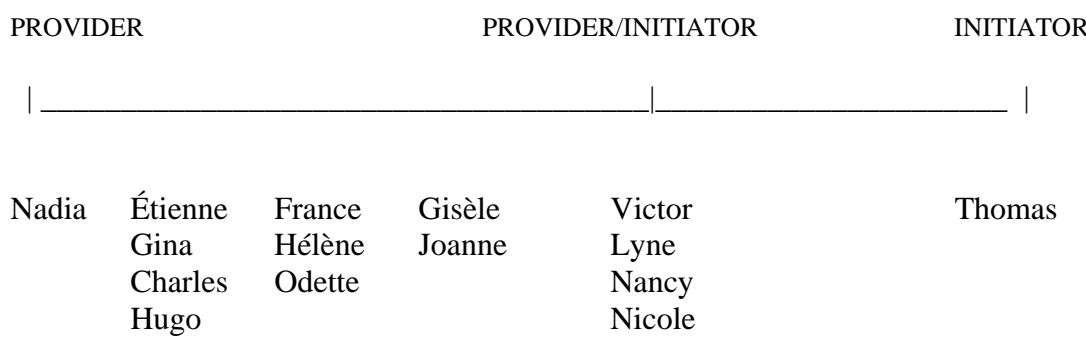| PROVIDER				PROVIDER/INITIATOR		INITIATOR
Nadia	Étienne	France	Gisèle	Victor		Thomas
	Gina	Hélène	Joanne	Lyne		
	Charles	Odette		Nancy		
	Hugo			Nicole		

Figure 6.1 Continuum of mentors' roles in regards to CF

In all, answers to this first question concur with the findings of teacher feedback research showing that teachers predominantly opt for direct corrections when providing feedback on form to their L2 learners (Lee, 2004, 2008; Ferris, 2006; Furneaux, Paran & Fairfax, 2007). It appears that, although beginning teachers have been exposed to research on the efficacy of different feedback strategies and are aware that direct corrections might not be the best option in all situations, most still use essentially that type of CF. There are dissimilarities in the mentors' CF behaviour, though, and these will be discussed when addressing the last two questions of this study, namely the role of beliefs in teachers' pedagogical practices and the congruence of those beliefs with their actions.

6.2 Choice of feedback strategy in relation to error category

The second research question asked whether the choice of feedback strategy depended on the categories of error. Theory suggests that certain categories of errors would be better candidates for treatment should appropriate feedback be given at the appropriate time. Truscott (2001) proposes two criteria for evaluating the *correctability* of different error categories. One is the criterion of simplicity, as in English count-mass distinction (much/many), and the other, the criterion of discreteness, or when there is only one item, as in the lexicon. As soon as an individual word is tied to another system though, it loses both its characteristics of simplicity and discreteness and belongs in the *non-correctable* category. Following this logic, Truscott considers articles and

prepositions to be correctable items[26] but he puts inflectional morphology, verb forms and syntax in the non-correctable category. Ferris (1999) uses a different terminology; for her, errors are either *treatable* or *untreatable*. But she disagrees with Truscott concerning verb forms and tenses which she considers to be treatable, and lexical errors which, in her opinion, belong in the untreatable category because there are no set of rules for learners to consult.

While this distinction between treatable and untreatable errors might very well explain why some categories of errors seem to benefit more from feedback than others, it does not provide an undisputable answer to the question of what CF strategy is preferable, direct or indirect. Results to some of the feedback studies reviewed in chapter 3 seem to indicate that engaging learners in problem-solving activities by providing indirect feedback might be beneficial (Aljafreh & Lantolf, 1994; Lalande, 1982); however, as Truscott (2001) notes, trying to push learners to self-correct when they are not yet capable of doing so, might be discouraging and even detrimental to their learning. As shown in other studies, more direct forms of correction might be better with learners at low proficiency levels and with complex linguistic features (Chandler, 2003). As indicated by Chandler, direct corrections provide a model of positive evidence which may be useful to the learners when they are ready to produce a linguistic feature, but are not quite there yet. In this perspective, combining indirect corrections that offer learners the opportunity to draw on their own resources, with errors that are considered treatable, and providing direct corrections on untreatable features could prove to be effective. Bitchener (2007), who investigated three different types of direct corrections on two functional uses of articles, found that direct corrections alone were not as helpful as direct

---

[26] See Hinenoya (2008) for a completely different view on the correctability of articles.

corrections with the addition of metalinguistic explanations. These results suggest that perhaps it is not simply the type of feedback – direct or indirect – or the correctable or uncorrectable nature of the errors that make the difference, but rather whether these corrections are accompanied or not by metalinguistic explanations.

In her study, Ferris (2006) found that what she considers treatable errors (verb tense, verb form, subject-verb agreement, articles, pronouns and spelling) received indirect corrections nearly 59% of the time, while the untreatable errors (word choice, idioms, sentence structure) received direct feedback in over 65% of the cases. The error category most often corrected by the instructors in that study was sentence structure, followed by word choice and verb tenses, and contrary to what had been planned, sentence structure errors were most often corrected directly. The categories of error which led to direct feedback in Ferris's study were primarily marked through direct corrections by the mentors in the Cyberscript study as well, although this percentage was not constant for every error category. The recourse to direct corrections was less frequent for errors with verbs (tense and form), spelling and L1 use, but more prevalent in the case of sentence structure (syntax) and style. It appears that the mentors' choice of feedback strategies might have been influenced, although not significantly, by the categories of error made by their mentorees.

Group figures show that more than 80% of errors relating to sentence structure and style (untreatable errors, as per Ferris, 2006) were marked through direct corrections. Errors were classified as errors of style when what the learners wrote was not incorrect but perhaps not fluid or context-specific, as in the following example: "there was an accident." In this case, the mentor felt that, in the context, the learner should have written "he had an accident." In another instance, a mentoree was describing what she liked

about Christmas and wrote the following: "With snow and stuff. Lights everywhere. This is MAGIC!" The mentor, apparently unmoved by the mentoree's use of poetic licence, rewrote it as one single sentence, using commas and semi-colons. On another occasion, the mentoree wrote: "I play football in Cyclones team, that's my favourite sport," and the mentor changed it to: "I play football in Cyclones team. Football is my favourite sport." Other instances marked as style by the mentors were comments on formality or appropriateness, such as the use of contractions (can't, don't, wouldn't), or words like "gonna" and "wanna." In the majority of these cases, mentors probably used direct corrections because they felt that learners would not have known what to change or how to change it, since what they had written was slightly inappropriate but not necessarily incorrect. Perhaps, as noted by Ferris (1999), the mentors were also thwarted by the absence of specific grammatical rules that their mentorees could consult regarding the use of these linguistic features.

Results to the first question indicated that the mentors' second most favoured CF strategy was indirect coded corrections. This was found to be true for all error categories, but even more so in the case of spelling errors and errors related to L1 use. In fact, spelling errors were corrected almost as often through indirect coded corrections as they were through direct feedback. One hypothesis to explain the mentors' use of indirect coded corrections with spelling errors, other than the fact that this is considered to be a treatable category, according to Ferris (1999) and Truscott (2001), is that, as mentioned during the interviews, mentors perceived those errors as a result of lack of attention on the part of the mentorees, and consequently, should have been relatively easy for them to self-correct. The mentors' considerable attention to spelling errors (it was the most frequently targeted error category) might be partly attributable to the fact that almost all

the mentors were non-native speakers of English. In several studies (Arva & Medgies, 2000; James, 1977; Sheory, 1986), it was found that non-native teachers were generally less tolerant of errors of that type, perhaps because they had to struggle themselves to master the intricacies of English spelling. Ferris (2006) also found that teachers frequently responded to spelling errors with indirect corrections.

In the case of errors related to L1 use, mentors also used indirect coded corrections quite often. An examination of the errors that were corrected by the mentors as "L1," or simply "French," revealed that these errors were for the most part lexical, as in the following example: *I want to <u>rest</u> there* (A1.2), instead of *I want to <u>stay</u> there*, and very rarely syntactic[27], as in this instance: *My parents <u>we</u> let us do more things* (G3.4), which is an approximate translation of the French sentence: **Mes parents <u>nous</u> laissent faire plus de choses**. However, although these errors occurred frequently, as reported by the mentors in their journal entries and interviews, they were the least often corrected and only four mentors indicated specifically paying attention to those (Nicole, Odette, Gina and Hugo). This avoidance, as we might call it, can also stem from the non-native status of the mentors. As reported by Medgies (2001), non-native speaker teachers might have a greater metalinguistic knowledge of the structure and linguistic rules of English than their native speaker counterparts, but less of a flair for the language, resulting in less emphasis on lexical and idiomatic accuracy. In addition, because the mentorees and most of the mentors in this study shared the same mother tongue, it is possible that some errors related to L1 use, that would not have 'sounded' right to native speakers, went by unnoticed by the non-native mentors.   As for the choice of indirect coded corrections,

---

[27] There were only 5 syntactic instances out of 54 coded as "French" or "L1" by the mentors.

this might be related to the mentors' belief that, like spelling errors, there are no specific rules, and learners would only need to look into a dictionary to find the English equivalent.

The categories of errors that generated the largest number of corrections (direct or indirect) accompanied by comments or explanations were verbs, determiners and errors with singular/plural. It might appear counterintuitive to provide explanations on features for which there are only two alternatives (singular/plural, a/an), but at the same time, because those errors meet the criteria of simplicity, mentors might have felt more comfortable explaining the rule. As mentioned earlier, several mentors reported that providing accurate grammatical explanations had been a challenge for them and, as a result, they had sometimes ignored some errors, or provided direct corrections. When the rules were simpler, mentors were perhaps more inclined to provide explanations, as in the following example: "*I am a teenagers*" (no need for an S since you're only one person) (C4.4).

A little more than half of the errors related to verbs (tenses and forms) were treated through direct corrections (56%), while the other half were almost equally marked through direct corrections with comments (14%), indirect coded corrections (17%), or indirect corrections with comments (12%). In other words, a little more than half of these errors received straight direct corrections, while the other half were given grammatical clues, in the form of codes or metalinguistic explanations.[28] Some mentors probably considered some errors to be treatable, and presumed that learners would be able to self-correct, while they provided explanations and direct corrections on more complex

---

[28] As reported earlier, although all the mentors, with the exception of Nadia and Charles, occasionally provided metalinguistic feedback, the use of this strategy was largely attributable to three mentors.

features. However, because this error category was very broad, as it included every error related to verb (tenses and forms), it was statistically impossible to tease apart which features benefited from direct or indirect corrections. Further examination of the corpus, however, revealed that simple verb tense errors were often treated with indirect corrections, coded or accompanied by metalinguistic comments. Oftentimes, for example, the mentors would comment on the use of present instead of past tense, or the reverse, by writing a comment such as "your verb should be in the past tense, because this happened in the past," whereas errors with modals, and perfect or progressive forms were more often treated with direct corrections, without explanations.

Word choice errors, along with verbs and spelling errors, were one of the three categories of errors most often corrected by the mentors. Ferris (2006) considers word choice to be untreatable and, in her study, more than 65% of those errors received direct corrections. This was the case in Cyberscript as well. More than 65% of word choice errors were treated through direct corrections, either with or without comments. As some mentors mentioned in their journal entries, it is quite difficult for a learner to self-correct a word choice error if he/she does not possess a large vocabulary base, as appeared to be the case with these high school learners. Therefore mentors provided the correct lexical item most of the time, and occasionally accompanied their corrections with comments or suggestions such as inviting their mentorees to consult a dictionary.

As can be observed, no clear answer to the second research question emerges from the results of the descriptive and inferential analyses. But certain tentative conclusions can be drawn. First, it appears that the mentors' linguistic background had an influence on the types of errors they paid attention to, and how they treated those errors. L1 use errors, although very frequent in the corpus according to the mentors, were

largely ignored, while spelling errors were given considerable attention.   This latter finding supports the results of previously cited research conducted with non-native speaker teachers showing that they are less tolerant of spelling errors than their native speaker counterparts.

Second, and this pertains to both research questions discussed above, results reveal that there is a great variability in the CF behaviour of the mentors, even if they were all at the same point in their teaching training program, and most had done the same courses. While some mentors appeared to have adopted a universal, "one size fits all" CF pattern, others diversified their approach and used both direct and indirect correction strategies, to a lesser or greater extent. At first glance, there does not appear to be a single factor that can explain the mentors' choice of one correction strategy over the other. But closer examination revealed a certain commonality in how mentors (excluding the mentors who were quasi-exclusive providers and initiators), reacted to different error categories. Errors of sentence structure, style and word choice were most often marked through direct corrections, while errors with verbs, spelling and L1 use generated indirect corrections almost as frequently as direct corrections. Some categories of errors also seem to have prompted some mentors to provide comments or metalinguistic explanations. That was the case with simple verb errors (auxiliary, past/present), determiners and errors with singular/plural morphology. In fact, errors that were either considered treatable (Ferris, 1999) or met the criteria of simplicity (Truscott, 2001) seem to have generated more comments or indirect corrections, while complex linguistic features were treated with direct corrections. This is consistent with the findings of earlier research (Ferris, 2006).

So far, research has considered the distinction between treatable and untreatable errors in terms of its usefulness to learners, in helping teachers establish which categories of errors would prove to be better candidates for CF treatment. Yet, results of the present study seem to indicate that this distinction could also be useful in understanding the CF behaviour of teachers, and the challenges they face. Several mentors mentioned during their interview, and in their journal entries, that they had targeted certain categories of errors. The reasons they invoked for focusing on those specific categories were either that the errors were recurrent in their mentorees' output, resulted from transfer or translation from French, or led to communication breakdowns. But it is possible that one of the underlying criteria for the mentors' choice of CF strategies was, in fact, the distinction between treatable and untreatable errors, although the mentors were not necessarily conscious of that. As reported above, mentors often gave explanations or used indirect corrections when the errors were relatively easy for them to explain and they could provide simple rules. This would seem to indicate that teachers, like their students, struggle with untreatable errors, such as sentence structure and style, while they have an easier time dealing with treatable errors (i.e., spelling, singular/plural). As they often mentioned during their interviews, the mentors were challenged by certain categories of errors and were not confident in their ability to provide adequate metalinguistic information. In their classroom observation study with inexperienced teachers, Mackey, Polio and McDonough (2004) had also remarked that even when the teachers were aware of an opportunity for them to use a certain technique to bring their learners to focus on form, they lacked the necessary skills to do so. It must also be noted that the mentors in this study were future L2 teachers, not writing teachers, whose teacher training program included only two courses covering specifically grammar and pedagogical grammar.

Although the mentors were fluent in English, speaking the language well does not guarantee that one understands the rules and is able to explain them. Therefore, irrespective of the results of the numerous studies that investigated the different feedback strategies and techniques, and that could, theoretically at least, guide the teachers in their decision making process, providing appropriate CF still remains a very challenging task facing a L2 teacher.

6.3 Congruence of Actions, Perceptions and Practices

The next set of questions addressed whether the mentors' beliefs about error correction were congruent with their error correction practices, and if those beliefs changed as a result of having provided CF to learners over a high school semester. In order to answer the first question, the mentors' perceptions of their actions as they expressed them in their journal entries and interviews will be compared with their actual practices, and then considered in light of their correspondence with their expressed beliefs. Then, results to the beliefs questionnaire administered before and after the project will be discussed.

While the project was ongoing, the mentors were required to complete journal entries on four different topics related to various aspects of CF. The second entry specifically addressed error identification and analysis. In this entry, mentors were enjoined to identify their learners' major problems with language, and note which categories of errors they addressed to help their mentorees improve. They were also questioned on whether they corrected comprehensively or selectively, and which CF strategy and technique they used, and the reasons why.

With regard to the errors they most paid attention to, what the mentors wrote in their journal entries was not entirely congruent with their behaviour. As stated earlier, the most frequently corrected categories of errors were spelling, verbs and word choice, and this was found to be true for every mentor. In fact, those categories of error amounted to 50% of the errors corrected by all the mentors. Because only the errors detected by the mentors were counted, there is no indication as to the most frequent categories, or as to the quantity of errors that occurred in the mentorees' output. It can be hypothesized, however, that the errors most often targeted by the mentors were also the ones that occurred most frequently in the mentorees' texts. Support for this hypothesis can be inferred from the behaviour of the four mentors who reported correcting comprehensively. The frequency with which they corrected those three categories of error was similar to the frequencies found for the mentors who reported correcting selectively.

Some mentors, however, did not seem totally aware that they had paid so much attention to those errors. Nadia, for example, reported that she had not focused on any specific category, but rather chose to address the errors that were recurrent in each of her mentorees' texts. But, similarly to her colleagues, 59% of her corrections were on spelling, verbs and word choice. Gina related paying special attention to errors with L1 (translations or transfers), singular-plural morphology and subject-verb agreement, yet figures indicate that 58% of her corrections were about the three most frequent categories mentioned above, and that she only actually corrected two errors related to L1 use. Hugo, the only mentor who reported correcting mechanics (errors of capitalization and punctuation) also corrected only one error of that kind. On the other hand, some mentors were more cognizant of their own behaviour. Nicole, for example, mentioned that she

targeted mostly spelling and word choice, and figures show that these categories accounted for 50% of her corrections. Similarly, more than one-quarter of the errors corrected by Charles were spelling errors, a type of error which he reported being especially annoyed with. Etienne related being aware of sentence structure errors, and indeed corrected those as often as spelling errors.

Although it was reported as an area of concern by most mentors, errors related to the L1 were the least corrected (only 54 errors of that kind were marked by the mentors). This implies that the mentors' acute awareness of these errors might have clouded their perceptions of how they treated them. Perhaps they were particularly conscious of those errors because, as francophone learners of English, they had had to contend with these difficulties as they were learning their L2. On the other hand, they might have unconsciously ignored those errors because, based on their own experience, they accepted them as part of the natural sequence of acquisition of English by francophone learners. In this case, as with spelling errors, the non-native status of the mentors, added to their familiarity with the language being learned by their mentorees, might have had an influence on their error correction pattern. In fact, the mentor who corrected the largest number of errors related to L1 was a non-francophone, Odette, a Greek native speaker, who reported having learned a lot through this project about the categories of errors made by francophone learners of English.

Four mentors, Nancy and Lyne (grammar class), and France and Étienne (non-grammar class), reported correcting comprehensively. Raw data of the average number of errors corrected per text show that, indeed, France and Étienne were the second and third most active correctors with 19 and 16 corrected errors per text, respectively, while Nancy was the fourth most comprehensive corrector with an average of 13 corrected

errors per text. But two mentors seemed to have inaccurate recollections of their own CF behaviour. Lyne, the second grammar class mentor who reported correcting comprehensively, actually had an average of nine corrected errors per text, a relatively modest figure considering that the lowest average was four. On the other hand, the most active corrector, with the highest average (22 corrected errors per text), was Odette, the third non-grammar mentor who, in her journal entry, reported correcting comprehensively at the very beginning, but changed her pattern quite early in the process, to focus on what she considered most important for each of her mentorees. Yet, further examination of the last texts she received shows that she corrected nearly every mistake right up until the end, thus contradicting her assertion that she adopted a selective CF pattern.

This seeming lack of awareness of teachers regarding their own behaviour was also reported by Montgomery and Baker (2007) in their study of the written feedback practices of 15 ESL writing teachers, which revealed a disparity between the ESL teachers' self-reported behaviour and their actual feedback practices. In Odette's case, her recollections of her CF behaviour may have been clouded by her insecurities in regards to her grammatical knowledge, as well as her belief that CF was essential because that is how she had learned her second and third languages. As for Lyne, a review of her corrected texts revealed that she overlooked several errors. During the interview, when asked to highlight all the errors in a text she had corrected at the beginning of the project, she also ignored some lexical and grammatical errors. This suggests that Lyne, who was an Italian native speaker, very fluent in English but not always accurate, might have been convinced that she was correcting comprehensively, not because she did so, but because she did not recognize all the errors made by her mentorees.

The discrepancy between perceptions and actual practices was also apparent in the mentors' recollections of their choice of correction strategies and techniques. In fact, the mentors who recalled using both strategies (direct and indirect) almost equally, were significantly more frequent users of direct corrections (more than 70% in all cases). Nancy was an exception in that she recalled having used mostly direct corrections whereas she provided direct and indirect corrections always equally, thus exhibiting a balanced CF pattern that she was seemingly unaware of. As previously shown, a lack of congruence between perceptions and practices was also found in the recent teacher feedback studies cited earlier (Furneaux, Paran & Fairfax, 2007; Lee, 2004, 2008; Montgomery & Baker, 2007). On the other hand, some mentors' perceptions mirrored their practices. Strikingly, those mentors were also the ones who recalled opting for one strategy exclusively: direct or indirect. These individual differences relative to the congruence between perceptions and practices appear to originate from dissimilar decision-making processes. It looks as if the mentors who had accurate recollections of their practices were the ones who had decided beforehand which type of corrections they would use, and thus had planned accordingly. For example, Thomas and Victor had drawn a list of codes that they sent to their mentorees with the first corrected text. Charles, Gina and Nadia had also decided to use selective direct corrections and to focus on those errors of form that impeded meaning. Étienne believed that providing students with the correct answer was the most suitable way to improve their writing, and he had decided to use reformulations that the mentorees could look up for future writing.

On the contrary, the mentors whose perceptions were generally less congruent with their correction pattern were also the ones who declared having adapted their correction strategy to the categories of errors, as well as the proficiency level of their

mentorees. But it appears that their perceptions revealed their intentions in regards to CF, rather than their actual practices. This lack of congruence between actions and perceptions corroborate the findings of earlier studies. Montgomery and Baker (2007) found that teachers tended to underestimate the amount of feedback they gave on errors of form, and to overestimate the amount of feedback they gave on content issues. In the case in point, mentors tended to underestimate the quantity of errors they corrected directly, as opposed to the errors they encouraged their learners to self-correct.

Odette, France, Hélène and Hugo reported using both strategies, but more than 80% of their corrections were direct (with or without comments). Joanne reported using both strategies, depending on the error category, and Gisèle said that she had used direct corrections at first, but had changed her pattern early in the process to provide indirect corrections. Figures indicate that they used direct corrections more than 60% of the time). Lyne and Nicole were two notable exceptions in this group of mentors. They both reported using the two strategies and their perceptions were accurate. Lyne's corrections were almost evenly distributed between direct and indirect, but they were always accompanied by comments or explanations. Nonetheless, she was quite systematic in her approach. She would use indirect corrections with recurrent errors that she had corrected or explained previously, but contrary to most other mentors, she corrected spelling directly, and used mostly indirect corrections for verb errors. As for Nicole, her choice of correction strategy depended partly on the category of errors and on her perception of the learners' ability to self-correct. She used indirect coded corrections almost exclusively for spelling errors, because she felt that the mentorees could look up the word in the dictionary. However, for verbs and lexical errors, she used both strategies, basing

her choice on the criteria of simplicity. If the rule was complex and she thought that learners would not be able to self-correct, or if she got discouraged trying to formulate an adequate explanation, she would provide the correct answer.

Other than the fact that the mentors were not face-to-face with their mentorees, the nature of the errors (treatable or untreatable) and a difficulty assessing the true proficiency level of their learners might have led the mentors to resort to direct corrections, although their original intentions had been to encourage the learners to self-correct. In addition, because the feedback was not related to instruction, and the mentorees were not required to rewrite their texts, the mentors were not inclined to use codes, or provide explanations that the learners may or may not understand. On the contrary, by using direct corrections, they were providing a positive model that their mentorees could reproduce in another text. And finally, as some mentors candidly admitted, providing accurate metalinguistic explanations when simple rules were not readily available was challenging and very time consuming.

Whereas there were several factors to consider for the mentors who were determined to personalize their correction strategies, the task was probably less daunting for the mentors who had opted for one correction strategy from the onset because they did not have to question themselves at every turn. In some cases, this choice did not necessarily mean less time on task for the mentors though. Étienne and Victor, for example, spent considerable time reformulating their mentorees' texts. It was not necessarily quicker to rewrite a text, but probably easier than to provide metalinguistic explanations or corrections, especially when the text was replete with errors.

As can be seen above, mentors approached their CF task differently, but the perceptions of the true providers and initiators were generally congruent with their

actions. Yet, although awareness of their own behaviour was high, they did not probe deeply into their motivation or reflect on their choices. Nadia, Charles and Gina, three exclusive providers, never really explained their reasons for using direct corrections. However, they were concerned with the impact of their corrections on their mentorees and mentioned that they did not want to overwhelm them with "red ink." Consequently, they would provide a correction when the meaning was unclear and there was an easy solution to the problem, or when they were annoyed by certain errors. Étienne, another true provider, circumvented the red-ink problem by providing reformulations, seemingly an easier task than providing metalinguistic explanations on complex linguistic features such as sentence structure. The mentors who chose to provide direct corrections were also genuinely more attentive to meaning than form, and when they addressed form, they marked errors that were recurrent, or that led to a breach of communication. In general, they did not seem overly concerned with the lack of improvement they witnessed in their mentorees. It also appears that these mentors based their decisions on their ideological conception of feedback, rather than a close analysis of their mentorees' needs.

The mentors who were determined to personalize their corrections, on the other hand, appeared to have reflected more on their CF pattern and on the challenge it represented. Odette spent hours in her grammar book, Hugo was distressed by his incapacity to help weaker learners, and Nicole and Joanne reported feeling frustrated and powerless with learners who continued making errors that had been previously signalled and annotated. These mentors also reported giving up on trying to explain complex linguistic issues. It also appears that the more mentors reflected on their practices, the more arduous their decision-making process became, mostly because of the multiple factors that entered into the equation, such as the level of proficiency of the mentorees,

the category and the complexity of errors, the motivation of the mentorees, and the context. When the challenge became too great, the mentors resorted to the easiest solution and corrected the learners' error themselves.

A comparison between the error correction practices of the mentors and their expressed beliefs also revealed a lack of congruence. At the first administration of the questionnaire, all mentors agreed that correction of grammatical errors was NOT a waste of time. In other words, they all believed that correcting grammatical errors was beneficial, and 12 out of 14 also agreed that they should correct all the grammatical errors learners make. Several of them also believed that non-corrected errors would fossilize. These results are very similar to the findings in Schulz (1996). In that study, 89% of the 200 teachers interviewed also believed that students' errors in writing should be corrected. Yet, most mentors also reported believing in selective corrections, and agreed that the content (meaning) of the message was more important than its form, with the exception of the three non-grammar mentors who favoured comprehensive corrections and were not convinced that they should focus on meaning at the expense of form. This orientation of inexperienced teachers towards meaning, rather than form, was also shown in several studies (Brown & McGannon, 1998; Mackey, Polio & McDonough, 2004; Mok, 1994).

This belief expressed by the mentors about the need to correct all grammatical errors may originate from their own experience as language learners, as well as their linguistic background. In the interviews, all mentors indicated believing in CF, irrespective of whether it had been effective or not for the Cyberscript project, because feedback had been essential in their own language learning process. The teacher trainees

investigated by Macdonald, Badger and White (2001), who initially had strong beliefs that grammatical errors should not be left uncorrected, were also non-native speakers, contrary to the participants in Brown and McGannon's (1998) study who were mostly native speakers and did not believe that immediate correction was beneficial.

These results also show the inconsistent and somewhat contradictory nature of beliefs. As noted by Mackey, Polio and McDonough (2004), this could be attributed to experience (the least experienced teacher in their study was also the most inconsistent), but also to the fact that some beliefs may be "potentially conflictual rather than inherently inconsistent" (p. 267). In Cyberscript, the mentors might have been struggling with making sense of their prior beliefs, especially if those were in contradiction with what they had been learning in their pedagogical grammar and L2 acquisition courses. Mentors also declared in their interviews that they sometimes hesitated to write negative comments (or corrections), because, in their opinion, the worst thing for learners was to see their paper "bleeding" with red ink. They were genuinely concerned with not hurting their mentorees' feelings. On the other hand, as mentioned earlier, they were also fearful that non-corrected errors would fossilize. As a result, the mentors were in a constant state of indecision. If they corrected everything, as they believed they should, their mentorees might become discouraged and demotivated; on the other hand, if they overlooked some errors, there was a danger of fossilization. For those mentors, providing CF became a balancing act between heart and reason.

A further hypothesis to explain the lack of congruence between beliefs, perceptions and actions is that the mentors had never before consciously examined their own beliefs. This lack of awareness of teachers' own beliefs was also found in Farrell and Lim (2005) who noted that pre-service or beginning teachers were neither

consciously aware of their beliefs, nor of their practices, before being asked to reflect on them. This would also explain why there were so few extreme answers on the questionnaires (i.e., totally agree or totally disagree). Examination of the mentors' answers to the pre-questionnaire indicated that, for the most part, the mentors used very moderate levels of agreement or disagreement for all the statements regarding grammar and error correction. This could be taken to indicate either that their beliefs were weak, or else, that they had never reflected on them and were unsure of what they really thought about these issues.

6.4 Changes in Beliefs

Descriptive and inferential analyses of the answers provided to the questionnaires, administered pre- and post-project, showed that there were no significant changes in beliefs as a result of the mentors having provided feedback to their mentorees. The mentors whose beliefs had been inconsistent or ambivalent in the first questionnaire generally remained so, and mentors who had expressed stronger and more coherent beliefs also remained constant. In their journal entries, none of the mentors reported having changed their outlook on language learning. Despite the lack of improvement observed in their mentorees, the mentors all reiterated their conviction that CF was essential to L2 development. This belief originated mostly from their prior learning experience and their recollection that feedback had been an essential part of their own language learning process. Reasons invoked for its lack of effectiveness in the Cyberscript project were the length of the project, the sporadic nature of the interactions with the mentorees, the mentors' unawareness of what the teacher had been focusing on,

and a lack of motivation on the part of the mentorees. But the mentors all believed that CF would have been effective on the long term.

When asked about the impact of the Cyberscript project on their beliefs and practices, the mentors expressed their indecision about the manner in which feedback should be provided, but they never questioned its usefulness. The mentors who had corrected comprehensively declared that they would not adopt this practice in the future. Several also said that they would use correction codes, hence encouraging the learners to self-correct. They were convinced that feedback should be related to teaching, and that they should provide feedback on features that had been the focus of instruction. They were also adamant that learners should actively participate in the correction process by either rewriting their text or self-correcting. But the mentors never wavered in their certainty that feedback was essential.   One of the two mentors who had disagreed, at first, with correcting all grammatical errors, even totally changed her perspective and was convinced, at the end of the project, that correction was essential.

Research on teacher cognition has shown that, although extremely resistant, beliefs can be susceptible to change if they are made explicit and submitted to the test of reality. If, as found by Farrell and Lim (2005) in their study with pre-service teachers, the mentors in Cyberscript were not yet consciously aware of their beliefs nor of their practices regarding feedback, the questionnaire they answered at the beginning of the project, the journal entries they were encouraged to complete, the Cyberscript project, and their 5-week internship in high school, should have heightened their awareness of both their beliefs and their practices. Yet, with one or two exceptions, their beliefs remained relatively constant, although they were not always coherent with their practices. The explanation for this seemingly immutable attitude must lie elsewhere.

In analysing the findings of her study investigating the error correction practices and beliefs of secondary school teachers, Lee (2008b)[29] refers to a lack of correspondence between what teachers believe and what they do as mismatches. She recommends that teachers be asked to "explain, analyse, and unpack the issues pertaining to feedback" (p. 7), in order to better understand these incongruities, and hopefully close the gap between their beliefs and their practices.

But perhaps there is no such gap. Perhaps a more judicious interpretation is that there are two layers of beliefs that proceed from distinct, but parallel realities. The first set of beliefs is conceptual. It originates from the reality of the mentors' language learning history (the "apprenticeship of observation"). These beliefs are affective, rather than cognitive (Nespor, 1982), and through time they evolved into an idealized conception of how things were and should be, but not necessarily how they are. For instance, some mentors admitted having been average high school students who did not pay much attention to their teacher's feedback, yet they still had this deeply ingrained conviction that feedback was effective or could have been effective, under different conditions.

The second layer of beliefs is empirical and imperative. It is empirical, as it is based on the here and now, on the reality of the classroom context and all it entails. It is imperative as it is driven by the reality of L2 teachers who are constantly faced with pedagogical decisions to make. In some cases these empirical beliefs are not in contradiction with the conceptual beliefs, but when they are, they will, and should, take precedence. The determination of the Cyberscript mentors not to overburden their mentees with too many corrections is commendable, and pedagogically sound,

---

[29] This article was discussed in section 3.3.1,

although it is in direct conflict with their conviction that all errors should be corrected. Faced with a situation for which there is no single right or universal solution (Nespor, 1987), teachers will base their decision on their experience and knowledge, but mostly on their judgement of what is best and appropriate for the learners and for themselves in the circumstances.

These two layers of beliefs might eventually converge. Changes can be effected, and beliefs and practices can evolve in conjunction with teaching experience (Johnson & Goettsch, 2002). Although the Cyberscript project did not lead to any notable changes in the mentors' beliefs, at least not in their conceptual beliefs, it nevertheless was the occasion for them to develop a greater awareness of their empirical beliefs and put them to the test, as well as experiment with the various strategies learned in their theoretical courses. Whereas the changes were not significant, some conceptual beliefs were weakened and others were reinforced. At the level of their empirical beliefs and their related pedagogical practices, mentors had the opportunity to "juggle with corrective feedback" (Thomas, fourth journal entry), and, for some, to reflect on their correction strategies for the first time. If, as research on teacher cognition informs us, reflection is the first step towards awareness and change, then the mentors in the Cyberscript project are now well on their way.

6.5   Limitations and direction for future research

"Imagine the impact this project could have had on the student teachers [the mentors] if we could have assessed our own work by seeing the effects of that feedback

on our mentorees' writing skills."[30] This is probably the first and foremost limitation of this study. Because the mentorees were encouraged, but not required to rewrite or self-correct their texts after receiving corrections, suggestions and comments, the mentors could not appreciate the effectiveness of their correction methods. Although it was not an objective of this study to evaluate the effectiveness of different CF strategies on the learners' accuracy, it might have made a difference in how mentors corrected their learners' texts if they could have monitored how the mentorees were making use of their corrections. Another limitation was the duration of the project. It lasted one full semester, but because the mentorees were going to the lab once in a 9-day cycle, the mentors only received six texts from each mentoree. This was perhaps too short a time span for the mentors to notice any changes or improvement in the mentorees' accuracy in writing.   Also, because there was no count of the number of errors, nor of the type of errors made by the mentorees, it was impossible to confirm whether the mentors had indeed adopted a selective or comprehensive correction pattern, as they reported in their journal entries and interviews.

Evidently, the fact that the mentors and mentorees never met face-to-face had an impact of how they interrelated. For some mentors though, this anonymity was an advantage rather than a drawback, as they felt they could remain very objective towards their mentorees. On the other hand, it made providing metalinguistic explanations more problematic and rendered checking for comprehension almost impossible.

Although the design of this study was methodologically sound, as it drew on both qualitative and quantitative methods of data collection in order to better capture the perceptions, actions and beliefs of the mentors, the small size of the group does not

---

[30] Quote retrieved from the interview with Thomas.

215

permit generalization. On the other hand, because the size of the group made it possible to report very rich and complete descriptions of the phenomena under scrutiny, this mixed method study can provide a point of departure for larger studies as the knowledge gained can be transferred and used "in a new set of circumstances" (Morgan, 2007, p. 72).

Finally, the fact that all mentors were non-native speaker teachers is another limitation. It is hypothesized that their linguistic status might have had an influence on the error categories they most paid attention to in their mentorees' texts. But in the absence of a control group of native speaker teachers, this hypothesis could not be explored. In this regard, future research could be conducted with both native and non-native speaker teachers to investigate the extent to which the linguistic background of the future ESL teachers dictates their error correction behaviour.

A popular saying among experienced teachers is that it takes a minimum of five years of teaching experience to finally become a teacher. Longitudinal studies investigating the error correction practices of L2 teachers, as they enter the profession, and then again 5 years later, would extend our knowledge of how teachers develop their practices, and how they reconcile their conceptual with their empirical beliefs, after having put those beliefs to the test. It could also inform the teacher training community in how best to prepare future ESL teachers for the challenging tasks that lie ahead.

This study provided a comprehensive description and analysis of the corrective feedback practices of a group of pre-service ESL teachers in the context of secondary education in the province of Québec. Although it is context-bound, several implications can be drawn from the results obtained. These will be discussed in the final chapter.

CHAPTER 7

CONCLUSION AND IMPLICATIONS

In a context where corrective feedback is often the "predominant method of grammar instruction," (Frodesen & Holten, 2003, p. 152) and teachers are invited to purposely focus on form through the provision of comments, suggestions and questions concerning the correct formulation of what their learners write or say (MELS, 2004), research on what teachers do in that respect is acutely needed. Yet, the Cyberscript project is, to my knowledge, the first study investigating the written error correction practices of high school pre-service ESL teachers in a North-American L2 environment. This study reveals that, notwithstanding the prescriptions of the MELS, the principal employer of ESL teachers in Québec, and the recommendations of published research on corrective feedback, pre-service ESL teachers appear to prefer direct correction strategies when providing corrective feedback on writing to their L2 learners.

These findings corroborate the results of most teacher feedback research conducted in recent years. Irrespective of their training, experience, geographical location and even linguistic background, second and foreign language teachers face the same challenges relative to corrective feedback, and adopt very similar correction patterns. Apparently, providing appropriate corrective feedback is as challenging as receiving it, and teachers and learners alike struggle with the process. As hypothesized in the previous chapter, the distinction between treatable and untreatable errors that has

always been considered from the learners' perspective might be a key in understanding ESL teachers' corrective feedback practices.

English as a second or foreign language is frequently taught by non-native speaker teachers, not only in Québec but elsewhere as well. Although there is a clear advantage for native speakers in terms of richness of vocabulary and their capacity to use the language spontaneously in a variety of communicative situations, some studies have shown that knowledge of grammar and metalinguistic awareness is generally greater in non-native speakers who have had to learn the structure and the rules of the language (Arva & Medgyes, 2000). Consequently, it could be expected that non-native speaker teachers would not recoil from the task of providing metalinguistic explanations to their L2 learners. However, it cannot be assumed that knowing the metalanguage of grammar means that teachers will use more grammatical terminology in their classrooms (Borg 1999), nor that they will be more accurate in their explanations (Bloor, 1986). In the Cyberscript study, the difficulty faced by the mentors in correctly identifying the categories of error made by the learners prevented them from using an indirect correction technique such as coding errors, and the challenge of providing adequate metalinguistic explanations on complex linguistic notions led them on the path of direct corrections.

Methodology courses developed for future language teachers generally address the teaching of the four skills (i.e., speaking, listening, reading and writing), as well as lesson plan preparation and delivery. But it seems that providing corrective feedback, orally or in writing, is considered a pedagogical practice that goes without saying, and that does not require any special training. The results of the various teacher feedback studies, including the present one, tell us otherwise.

Over and above exposing future teachers to the role of error correction in L2 acquisition, and to the various strategies and techniques that can be employed to provide it, teacher trainers should also address the challenges faced by future L2 teachers. One of these challenges is to develop their metalinguistic awareness of the rules of the language as well as their pedagogical skills in making those rules understandable to their learners. Future teachers must also become better skilled at evaluating the proficiency level and capabilities of their learners, as well as the categories of error they commit, in order to choose the appropriate error correction treatment.

Consistent with research on teacher cognition, this study has revealed a paradox between the actions, perceptions and beliefs of the pre-service teachers and has shown that awareness of conceptual beliefs does not necessarily have an impact on error correction practices because, often, those beliefs cannot be reconciled with the pedagogical imperatives of the classroom. Contrary to what many studies have concluded, however, this lack of congruence should not be interpreted as the source of an inconsistent corrective feedback pattern, but rather as the result of a clash between different realities that future teachers must learn to counterbalance.

Irrespective of what the pre-service teachers believe when they come into a teacher training program, and the knowledge they subsequently gain, the real test comes when they are faced with a classroom of 30 learners of different proficiency levels, and they have to choose the appropriate classroom management and pedagogical strategies. The inconsistencies that can be observed then between their beliefs and practices are not due to a lack of reflection or awareness, but to the innumerable spur-of-the-moment decisions that have to be made.

Student-teachers often deplore that university does not adequately prepare them for the reality of the classroom, and that educational theory is of no help to them. In that respect, internships are a vital part of any teacher training program because they offer a unique opportunity to practice what has been learned. However, the way internships are structured in most Québec universities is not necessarily conducive to establishing those essential links between theory and practice. Internships usually occur at the end of a term, after the theoretical courses have been completed, and even when there are occasional meetings at university during that period of time, this structure only confirms that practice and theory are two different things that do not converge. Instead, if internships were organized so that there was a constant back and forth between the school community and the learning environment, tensions that are bound to occur as a result of a clash between theory and practice would be better analysed, interpreted and understood. In this regard, teacher trainers have a responsibility to develop the future teachers' self-reflective skills, so that they can analyze their own behaviour, discover their inconsistencies and understand where they originate from, as well as develop strategies to change what can be changed, and handle the unforeseeable.

The findings of the present study will contribute to identifying new research avenues relative to the practices adopted by pre-service ESL teachers of different linguistic backgrounds in regards to corrective feedback, and how these practices develop over time, as well as stimulate interest in developing new perspectives for the training and development of our future L2 teachers. Finally, the mixed method design and methodology of this study may inspire other researchers who wish to understand a phenomenon in its totality and explore issues that need to be described in words, as well as numbers.

REFERENCES

Adams, R. (2003). L2 output, reformulation and noticing: implications for IL development. *Language Teaching Research, 7*, 347-376.

Aljaafreh, A., & Lantolf, J. (1994). Negative feedback as regulation and second language learning in the zone of proximal development. *Modern Language Journal, 78*, 465-483.

Almarza, G. (1996). Student foreign language teachers' growth. In D. Freeman & J.C. Richards (Eds.), *Teacher learning in language teaching* (pp. 50-78). Cambridge: Cambridge University Press.

Andrews, S. (2006). The evolution of teachers' language awareness. *Language Awareness*, *15*, 1-19.

Andrews S. (2003). Teacher language awareness and the professional knowledge base of the L2 teacher. *Language Awareness, 12*, 81-95.

Andrews, S. (2001). The language awareness of the L2 teacher: Its impact upon pedagogical practice. *Language Awareness, 10,* 75–90.

Andrews, S. (1999a). 'All these like little name things': A comparative study of language teachers' explicit knowledge of grammar and grammatical terminology. *Language Awareness, 8*, 143–159.

Andrews, S. (1999b). Why do L2 teachers need to "know about language"? Teacher metalinguistic awareness and input for learning. *Language and Education*, *13*, 161-177.

Arva, V. & Medgyes, P. (2000). Native and non-native teachers in the classroom. *System*, *28*, 355-372.

Ashwell, T. (2000). Patterns of teacher response to student writing in a multiple-draft composition classroom: is content feedback followed by form feedback the best method? *Journal of Second Language Writing, 9*, 227-257.

Bailey, K., Bergthold, B., Braunstein, B. Fleischman, N., Holbrook, M.P., Tuman, J., Waissbluth, X., and Zambo, L.J. (1996). The language learner's autobiography: examining the "apprenticeship of observation". In D. Freeman & J.C. Richards (Eds.), *Teacher learning in language teaching* (pp. 11-29). Cambridge: Cambridge University Press.

Basturkmen, H., Loewen, S., & Ellis, R. (2004). Teachers' stated beliefs about incidental focus on form and their classroom practices. *Applied Linguistics*, *25*, 243-272.

Bitchener, J. (2008). Evidence in support of written corrective feedback. *Journal of Second Language Writing, 17*, 102-118.

Bitchener, J., Young, S., & Cameron, D. (2005). The effect of different types of corrective feedback on ESL student writing. *Journal of Second Language Writing, 14*, 191-205.

Bloch, J. (2002). Student/teacher interaction via email: the social context of Internet discourse. *Journal of Second Language Writing, 11*, 117-134.

Bloor, T. (1986). What do language students know about grammar? *British Journal of Language Teaching*, *24*, 157-60.

Borg, M. (2004). Key concepts in ELT: The apprenticeship of observation. *ELT Journal, 58*, 274-276.

Borg, S. (2003b). Teacher cognition in language teaching: a review of research on what language teachers think, know, believe, and do. *Language Teaching*, *36*, 81-109.

Borg, S. (2003a). Teacher cognition in grammar teaching: a literature review. *Language Awareness, 12*, 96-108.

Borg, S. (2001). Self-perception and practice in teaching grammar. *ELT Journal*, *55***,** 21-29.

Borg, S. (1999). Studying teacher cognition in second language grammar teaching. *System, 27*, 19-31.

Borg, S. (1998). Talking about grammar in the foreign language classroom. *Language Awareness, 7*, 159-175.

Brown, J. & McGannon, J. (1998). What do I know about language learning? The story of the beginning teacher. From http://www.cltr.uq.edu.au/alaa/proceed/bro-mcgan.htm. Accessed September 25 (2006).

Burgess, J., & Etherington, S. (2002). Focus on grammatical form: explicit or implicit? *System*, *30*, 433-458.

Cabaroglu, N., & Roberts, J. (2000). Development in student teachers' pre-existing beliefs during a 1-year PGCE programme. *System, 28*, 387-402.

Calvé, P. (1992). Corriger ou ne pas corriger, là n'est pas la question. *Canadian Modern Language Review, 48,* 459-471.

Chandler, J. (2004). A response to Truscott. *Journal of Second Language Writing, 13*, 345-348.

Chandler, J. (2003). The efficacy of various kinds of error feedback for improvement in the accuracy and fluency of L2 student writing. *Journal of Second Language Writing*, *2*, 267-296.

Clandinin, J. D., & Connelly M. F. (1987). Teachers' personal knowledge: what counts as "personal" in studies of the personal. *Journal of Curriculum Studies, 19*, 487-500.

Cohen, A., & Calvacanti, M. (1990). Feedback on compositions : Teacher and student verbal reports. In B. Kroll (Ed.), *Second language writing: Research insights for the classroom* (pp. 155-177). Cambridge: Cambridge University Press.

Cohen, A., & Robbins, M. (1976). Towards assessing interlanguage performance: The relationship between selected errors, learners' characteristics, and learners' explanations. *Language Learning*, *26*, 45-66.

Conrad, S.M., & Goldstein, L.M. (1999). ESL student revision after teacher-written comments: text, contexts, and individuals. *Journal of Second Language Writing*, *8*, 147-179.

Cresswell, J., & Plano Clark, V.L. (2007). *Designing and conducting mixed-methods research*. Thousand Oaks, CA: Sage.

Denscombe, M. (1982). The "hidden pedagogy" and its implications for teacher training. *British Journal of Sociology of Education*, *3*, 249-65.

Dörnyei, Z (2003). *Questionnaires in second language research : construction, administration, and processing*. Mahwah, NJ : Lawrence Erlbaum Associates.

Doughty, C. (2003). Instructed SLA : constraints, compensation, and enhancement. In Doughty, C.J. and Long, M.H. (Eds.), *The Handbook of Second Language Acquisition* (pp. 256-310). Malden, MA: Blackwell Publishing.

Doughty, C. (1991). Second language instruction does make a difference. *Studies in Second Language Acquisition*, *13*, 431-469.

Doughty, C., & Williams, J. (1998). *Focus on form in classroom second language acquisition*. Cambridge. Cambridge University Press.

Eisenhart, M. A., Shrum, J. L. Harding, J. R. & Cuthbert. A. M. (1988). Teacher beliefs: Definitions, findings, and directions. *Educational Policy*, *2*, 51-70.

Ellis, M.E. (2006). Language learning experience as a contributor to ESOL teacher cognition. *TESL-EJ, 10*. Accessed October 16, 2006 from http://www-writing.berkeley.edu/TESL-EJ/ej37/a3.html.

Ellis, R. (2008). A typology of written corrective feedback types. *ELT Journal, 63*, 97-107.

Ellis, R. (2001). Investigating form-focused instruction. *Language Learning*, *51*, 1–46.

Ellis, R., Loewen, S., & Basturkmen, H. (2001). Learner uptake in communicative ESL lessons. *Language Learning*, *51*, 281-318.

Enginarlar, H. (1993). Student response to teacher feedback in EFL writing. *System*, *21*, 193-104.

Fang, Z. (1996). A review of research on teacher beliefs and practices. *Educational Research*, *38*, 47-65.

Farrell, T.S.C., & Lim, (2005). Conceptions of grammar teaching: a case study of teachers' beliefs and classroom practices. *TESL-EJ*, *9*, 1-3.

Fathman, A. & Whalley, E. (1990). Teacher response to student writing: Focus on form versus content. In B. Kroll (Ed.), *Second language writing: Research insights for the classroom* (pp. 178-190). Cambridge: Cambridge University Press.

Fazio, L. (2001). The effects of corrections and commentaries on the journal writing accuracy of minority- and majority-language students. *Journal of Second Language Writing*, *10*, 235-249.

Ferris, D. (2006). Does error feedback help student writers? New evidence on the short- and long-term effects of written error correction. In K. Hyland & F. Hyland (Eds.), *Feedback in second language writing* (pp. 81-102). Cambridge: Cambridge University Press.

Ferris, D. (2004). The "Grammar Correction" Debate in L2 Writing: Where are we, and where do we go from here? (and what do we do in the meantime…?). *Journal of Second Language Writing*, *13*, 49-62.

Ferris, D. (2003). *Responding to student writing: Implications for second language students.* Mahwah: Lawrence Erlbaum Associates.

Ferris, D. (1999). The case for grammar correction L2 writing classes: A response to Truscott (1996). *Journal of Second Language Writing*, *8*, 1-11.

Ferris, D. (1997). The influence of teacher commentary on student revision. *TESOL Quarterly*, *31*, 315-339.

Ferris, D. (1995). Student reactions to teacher response in multiple-draft composition classrooms. *TESOL Quarterly*, *29*, 33-53.

Ferris, D., & Roberts, B. (2001). Error feedback in L2 writing classes. How explicit does it need to be? *Journal of Second Language Writing*, *10*, 161-184.

Freeman, D. (1989). Teacher training, development and decision-making: a model of teaching and related strategies for language teacher education. *TESOL Quarterly*, *23*, 27-45.

Frodesen, J., & Holten, C. (2003). Grammar and the ESL writing class. In B. Kroll (Ed.), *Exploring the dynamics of second language writing* (pp. 141-161). Cambridge: Cambridge University Press.

Furneaux, C., Paran, A., & Fairfax, B. (2007). Teacher stance as reflected in feedback on student writing: an empirical study of secondary school teachers in five countries. *International Review of Applied Linguistics, 45*, 69-94.

Gass, S., & Selinker, L. (2001). *Second language acquisition*. Mahwah, N.J.: Lawrence Erlbaum Associates.

Golombek, P.R. (1998). A study of language teachers' personal practical knowledge. *TESOL Quarterly, 32*, 447-464.

Gonzalez-Bueno, M., & Perez, L. C. (2000). Electronic mail in foreign language writing: a study of grammatical and lexical accuracy, and quantity of language. *Foreign Language Annals, 33*, 189-197.

Goring-Kepner, C. (1991). An experiment in the relationship of types of written feedback to the development of second-language writing skills. *The Modern Language Journal, 75*, 305-313.

Gouvernement du Québec, Ministère de l'Éducation, du loisir et du sport. (2005). *Evaluation of learning at the secondary level*. Preliminary version. Québec.

Gouvernement du Québec, Ministère de l'Éducation, du loisir et du sport. (2004). *Programme de formation de l'école québécoise, premier cycle du secondaire.* Québec.

Guénette, D. (2007). Is feedback pedagogically correct? Research design issues in studies of feedback on writing. *Journal of Second Language Writing*, *16*, 40-53.

Han, Z.H. (2004). *Fossilization in adult second language acquisition*. Clevedon: Multilingual Matters.

Hatch, E., & Lazaraton, A. (1990). *The research manual: Design and statistics for applied linguistics*. New York: Newbury House.

Hedgcock, J., & Lefkowitz, N. (1994). Feedback on feedback : Assessing learners' receptivity to teacher response in L2 composing. *Journal of Second Language Writing*, *3*, 141-163.

Hendrickson, J. (1980). The treatment of error in written work. *The Modern Language Journal, 64*, 216-221.

Hinenoya, K. (2008). *Conceptual complexity and accessibility of the article 'the': Is the traditional interpretation of 'the' enough for ESL learners?* Unpublished doctoral dissertation, McGill University, Montreal.

Howell, D. (2007). *Statistical methods for psychology* (6th ed.). Belmont, CA: Thomson Wadsworth.

Hyland, F. (2003). Focusing on form: student engagement with teacher feedback. *System, 21*, 217-130.

Hyland, K., & Hyland, F. (2006). Interpersonal aspects of response: constructing and interpreting teacher written feedback. In K. Hyland & F. Hyland (Eds.), *Feedback in second language writing* (pp. 206-224). Cambridge: Cambridge University Press.

Hyland, F., & Hyland, K. (2001). Sugaring the pill : Praise and criticism in written feedback. *Journal of Second language Writing*, *10*, 185-212.

James, C. (1977). Judgements of error gravities. *ELT Journal*, *31*, 116-124.

Johnson, B., & Goettsch, K. (2000). In search of the knowledge base of language teaching: explanations by experienced teachers. *Canadian Modern Language Review, 56*, 437-68.

Johnson, K. E. (1994). The emerging beliefs and instructional practices of preservice English as a second language teacher. *Teaching & Teacher Education, 10*, 439-452.

Johnson, K. E. (1992a). Learning to teach: instructional actions and decisions of pre-service ESL teachers. *TESOL Quarterly, 26*, 507-535.

Johnson, K. E. (1992b). The relationship between teachers' beliefs and practices during literacy instruction for non-native speakers of English. *Journal of Reading Behavior*, *24*, 83-105.

Johnson, R.B., & Onwuegbuzie. A.J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher, 33(7),*14-26.

Kagan, D. M. (1990). Ways of evaluating teacher cognition: inferences concerning the goldilocks principle. *Review of Educational Research*, *60*, 419-469.

Karakas-Doukas, E. (1996). Using attitude scales to investigate teachers' attitudes to the communicative approach. *ELT Journal*, *50*, 187-198.

Krashen, S.D. (1985). *The input hypothesis: Issues and implications*. New York, Longman.

Krashen, S.D. (1981). *Second language acquisition and second language learning*. New York : Pergamon Press.

Kroll, B. (1990). What does time buy? ESL student performance on home versus class composition. In B. Kroll (Ed.), *Second language writing : Research insights for the classroom* (pp. 140-154). Cambridge: Cambridge University Press.

Kupelian, M. (2001). The *use of e-mail in the L2 classroom: an overview*. SLLT, 1. Retrieved March 2004 from http://uqa.edu.au/opacs/cllt/sllt.

Lalande, J. (1982). Reducing composition errors: An experiment. *The Modern Language Journal*, *66*, 140-149.

Larsen-Freeman, D. (2003). Teaching Grammar. In M. Celce-Murcia (Ed.), *Teaching English as a Second or Foreign Language* (pp.251-265). Boston, MA: Newbury House.

Lee, I. (2008a). Understanding teachers' written feedback practices in Hong Kong secondary classrooms. *Journal of Second Language Writing, 17*, 69-85.

Lee, I. (2008b). Ten mismatches between teachers' beliefs and written feedback practice. *ELT Journal, 63, 13-22.*

Lee, I. (2004). Error correction in L2 secondary writing classrooms: The case of Hong-Kong. *Journal of Second Language Writing*, *13*, 285-312.

Leki, I. (2003). A challenge to second language writing professionals: Is writing overrated? In B. Kroll (Ed.), *Exploring the dynamics of second language writing* (pp. 315-331). New York: Cambridge University Press.

Leki, I. (1991). The preferences of ESL students for error correction in college-level writing classes. *Foreign Language Annals*, *24*, 203-218.

Lightbown, P. & Spada, N. (2006). *How languages are learned* (3rd ed.). Oxford: Oxford University Press.

Lightbown, P., & Spada, N. (1993). *How languages are learned*. Oxford : Oxford University Press.

Long, M.H. (2003). Stabilization and fossilization in interlanguage development. In C.J. Doughty & M.H. Long (Eds.), *The handbook of second language acquisition* (pp. 487-535). Malden, MA: Blackwell Publishing.

Long, M.H. (1996). The role of the linguistic environment in second language acquisition. In W.C. Ritchie & T.K. Bahtia (Eds.), *Handbook of second language acquisition* (pp. 413-68). New York: Academic Press.

Lyster, R. (2007). *Learning and teaching languages through content: A counterbalanced approach.* Philadelphia: John Benjamins.

Lyster, R. (2004). Research on form-focused instruction in immersion classrooms: implications for theory and practice. *French Language Studies*, *14*, 321-341.

Lyster, R. (2002). Negotiation in immersion teacher-student interaction. *International Journal of Educational Research, 37,* 237-253.

Lyster, R. (1998). Recasts, repetitions, and ambiguity in L2 classroom discourse. *Studies in Second Language Acquisition*, *20*, 55-58.

Lyster, R., & Mori, H. (2006). Interactional feedback and instructional counterbalance. *Studies in Second Language Acquisition*, *28*, 269-300.

Lyster, R., & Ranta, L. (1997). Corrective feedback and learner uptake. negotiation of form in communicative classrooms. *Studies in Second Language Acquisition*, *20*, 37-66.

MacDonald, M., Badger, R., & White, G. (2001). Changing values: what use are theories of language learning and teaching? *Teaching and Teacher Education*, *17*, 949-63.

Mackey, A., & Gass, S.M. (2005). *Second language research: Methodology and design.* Mahwah, NJ: Lawrence Erlbaum.

Mackey, A., Polio, C., & McDonough, K. (2004). The relationship between experience, education and teachers' use of incidental focus-on-form techniques. *Language Teaching Research, 8*, 301-327.

MacMillan, J. H., & Schumacher, S. (1989). *Research in education: A conceptual introduction* (2nd ed.),. New York: Harper Collins Publisher.

Matsuda, P.K. (2003). Second language writing in the twentieth century: a situated historical perspective. In B. Kroll (Ed.), *Exploring the dynamics of second language writing* (pp. 15-34). New York: Cambridge University Press.

Medgyes, P. (2001). When the teacher is a non-native speaker. In M. Celce-Murcia (Ed.), *Teaching English as a second or foreign language* (pp.429-442). Boston: Heinle & Heinle.

Mok, W. E. (1994). Reflecting on reflections: A case study of experienced and inexperienced ESL teachers. *System*, *22*, 93-111.

Montgomery, J.L., & Baker, W. (2007). Teacher-written feedback: Student perceptions, teacher self-assessment, and actual teacher performance. *Journal of Second Language Writing, 16*, 88-99.

Morgan, D.L. (2007). Paradigms lost and pragmatism regained: Methodological implications of combining qualitative and quantitative methods. *Journal of Mixed Methods Research, 1,* 48-76.

Nespor, J. (1987). The role of beliefs in the practice of teaching. *Journal of Curriculum Studies*, *19*, 317-328.

Numrich, C. (1996). On becoming a language teacher: Insights on diary studies. *Tesol Quarterly, 30*, 131-153.

Pajares, M. F. (1992). Teachers' beliefs and educational research: Clearing up a messy construct. *Review of Educational Research*, *62*, 307-331.

Parkay, F. W., & Hardcastle Stanford, B. (2004). *Becoming a teacher*. Scarborough: Allyn & Bacon Canada.

Pappas, P.A., & DePuy, V. (2004). An overview of non-parametric tests in SAS : When, why and how. Retrieved March 24, 2008, from Institute for Advanced Analytic Web Site: http://analytics.ncsu.edu/sesug/2004/TU04-Pappas.pdf

Peacock, M. (2001). Pre-service ESL teachers' beliefs about second language learning: A longitudinal study. *System*, *29*, 177-195.

Pennington, M. (2002). The impact of the computer in second language writing. In M. Warschauer, & R. Kern (Eds.), *Network-based language teaching: Concepts and practice* (pp. 287-308). New York: Cambridge University Press.

Pienemann, M. (1989). Is language teachable? *Applied Linguistics*, *10*, 52-79.

Polio, C. (2003). Research on second language writing: an overview of what we investigate and how. In B. Kroll (Ed.), *Exploring the dynamics of second language writing* (pp. 35-65). New York: Cambridge University Press.

Polio, C. (1997). Measures of linguistic accuracy in second language writing research. *Language Learning*, *47*, 101-143.

Polio, C., Fleck, C. & Leder, N. (1998). "If only I had more time": ESL learners' changes in linguistic accuracy on essay revision. *Journal of Second Language Writing*, *7*, 43-68.

Qi, D., & Lapkin, S. (2001). Exploring the role of noticing in a three-stage second language writing task. *Journal of Second Language Writing*, *10*, 277-303.

Radecki, P., & Swales, J.M. (1988). ESL student reaction to written comments on their written work. *System*, *16*, 355-365.

Richards, J.C., & Rodgers, T.S. (1986). *Approaches and methods in language teaching,* Second Edition. Cambridge: Cambridge University Press.

Richards, J.S., Gallo, P.B., & Renandya W.A (2001). Exploring teachers' beliefs and the processes of change. *TESL-EJ*, *9*, 1-13. Accessed September 15, 2006 from http://www.cltr.uq.edu.au/alaa/proceed/bro-mcgan.htm.

Robb, T., Ross, S., & Shortreed, I. (1986). Salience of feedback on error and its effect on EFL writing quality. *TESOL Quarterly* , *20*, 83-93.

Robinson, P. (2001). Task complexity, cognitive resources, and syllabus design: A triadic framework for examining task influences on SLA. In P. Robinson (Ed.). *Cognition and second language acquisition*. (pp. 287-318). Cambridge: Cambridge University Press.

The Rosebrook Company (n.d.). The difference between a teaching strategy and a teaching technique. Retrieved October 6, 2006, from http://rosebrooke.com/strategytechnique_02-02-2002.html

Russell, J., & Spada, N. (2005). The effectiveness of corrective feedback for the acqisition of L2 grammar. A meta-analysis of the research. In J. M. Norris & L. Ortega (Eds.), *Synthesizing research on language learning and teaching* (pp. 133-164). Philadelphia: John Benjamins.

Sachs, R., & Polio, C. (2007). Learners' use of two types of written feedback on a L2 writing revision task. *Studies in Second Language Acquisition*, *29*, 67-100.

Savignon, S. & Wang, C. (2003). Communicative language teaching in EFL contexts: Learner attitudes and perceptions. *International Review of Applied Linguistics in Language Teaching (IRAL)*, *41*, 223-249.

Schmidt, R. (1990). The role of consciousness in second language learning. *Applied Linguistics*, *11*, 129-158.

Schmidt, R., & Frota, S. (1986). Developing basic conversational ability in a second language: A case study of an adult learner of Portuguese. In R.R. Day (Ed.), *Talking to learn: Conversation in second language acquisition* (pp. 237-326). Rowley, MA: Newbury House.

Schulman, L.S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher*, *15*, 4-14.

Schulz, R. (2001). Cultural differences in student and teacher perceptions concerning the role of grammar instruction and corrective feedback : USA-Columbia. *Modern language Journal*, *85*, 244-258.

Schulz, R. (1996). Focus on form in the foreign language classroom : Students' and teachers' views on error correction and the role of grammar. *Foreign Language Annals, 29*, 343-364.

Segalowitz, N. (2003). Automaticity and second languages. In C.J. Doughty & M.H. Long (Eds.), *The Handbook of Second Language Acquisition* (pp. 382-408). Malden, MA: Blackwell Publishing.

Semke, H. (1984). The effects of the red pen. *Foreign language Annals*, *17*, 195-202.

Sheory, R. (1986). Error perceptions of native-speaking and non-native-speaking teachers of ESL. *ELT Journal*, *40*, 306-312.

Sheppard, K. (1992). Two feedback types: Do they make a difference? *RELC Journal*, *23*, 102-110.

Simard, D. (2004). Le journal de bord comme outil de réflexion dans la classe d'anglais langue seconde du primaire: Qu'en pensent les premiers concernés? *The Canadian Modern Language Review*, *61*, 203-224.

Skehan, P. (2003). Task-based instruction. *Language Teaching, 36*, 1-14.

Spada, N. (1997). Form-focussed instruction and second language acquisition: A review of classroom and laboratory research. *Language Teaching, 30*, 73-87.

Spada, N., & Massey, M. (1992). The role of prior pedagogic knowledge in determining the practice of novice ESL teachers. In J. Flowerdew, M. Brock & S. Hsia (Eds.), *Perspectives on second language teacher education* (pp. 23-37). Hong Kong: City Polytechnic of Hong Kong.

SPEAQ (2002). *Améliorer l'apprentissage de l'anglais langue seconde et optimiser le plan d'action pour la langue seconde du Ministère de l'Éducation du Québec.* Document de réflexion présenté au Ministère de l'Éducation du Québec.

Swain, M. (1985). Communicative competence: Some roles of comprehensible input and comprehensible output in its development. In S. Gass & C. Madden (Eds.), *Input in second language acquisition* (pp. 235-253). Rowley, MA: Newbury House.

Tocalli-Beller, A., & Swain, M. (2005). Reformulation: the cognitive conflict and L2 learning it generates. *International Journal of Applied Linguistics*, *15*, 5-28.

Truscott, J. (2004). Evidence and conjecture on the effects of correction: A response to Chandler. *Journal of Second Language Writing*, *13*, 337-343.

Truscott, J. (1999). The case for "The case against grammar correction in L2 writing classes": A response to Ferris*. Journal of Second Language Writing, 9*, 111-122.

Truscott, J. (1996). The case against grammar correction in L2 writing classes. *Language Learning*, *46*, 327-369.

Van Patten, B., & Cadierno, T. (1993). Input processing and second language acquisition: A role for instruction. *Modern Language Journal*, *77*, 45-57.

Vasseur, M. (2002). Comment les analyses interactionnistes réinterprètent la notion de compétence. Compétence en langue ou efficacité en discours? *La notion de compétence en langue. Notions en questions*, *6*, 37-49.

Wang, Y.M. (1996). *E-mail Dialogue journaling in an ESL reading and writing classroom.* In Proceedings of selected research and development presentations at the 1996 National Convention of the Association for Educational Communications and Technology, Indianapolis, IN, 1996. (ERIC No: ED397845).

White, L. (1991). Adverb placement in second language acquisition : Some effects of positive and negative evidence in the classroom. *Second Language Research*, *7*, 133-161.

Woods, D. (1996). *Teacher cognition in language teaching, beliefs, decision-making and classroom practice*. Cambridge: Cambridge University Press.

Wright, T., & Bolitho, R. (1993). Language awareness: a missing link in language teacher education? *ELT Journal*, *47*, 292-304.

Zamel, V. (1985). Responding to student writing. *TESOL Quarterly*, *19*, 79-101.

Zolten, J. (1997). *E-mail bonding: Making the most of electronic communication between teacher and student.* Paper presented at the Annual Meeting of the National Communication Association, Chicago, ILL. 1997. (ERIC No: 416543).

Appendix A – Corrective Feedback Studies

Table 3.1

Studies comparing feedback on content with feedback on form

Authors	*n =*	CG[1]	Duration	Treatment	Data Collection instruments and elicitation tasks	Results
Semke (1984)	- 114 first-year students of German	NO	10-weeks	- Comments on content - Form: direct corrections - Form + comments - Form: Indirect corrections	WRITING SAMPLES + - Free journal writings (Tagebuch) for groups 1, 2 and 3 - Rewrites on journal writings for group 4 - Attitude questionnaire - Pre-tests and post-tests (free-writing and cloze tests) Students were graded according to number of words written.	No significant differences *Content group showed more progress on measures of fluency*
Fathman & Whalley (1990)	- 72 intermediate ESL learners	YES	One composition	- Indirect form: errors underlined - Content feedback - Form and content	WRITING SAMPLES ONLY - One composition. Students were given 30 minutes to correct. Compositions were assessed for content and form. - Grammar scores: number of grammar errors in each composition.	Significant improvement in accuracy for the indirect correction group *Content improved regardless of treatment*
Goring-Kepner (1991)	- 60 students of Spanish of low and high levels	NO	One semester	- Form: direct corrections + explanations - Content+ questions and suggestions	WRITING SAMPLES ONLY - Journal writings written and corrected every two weeks, over an entire semester. - Entry 6 (week 12) was used for analysis – 200 word on a specific topic Students received a grade worth 15% of the total coursework for their journal writing activities.	No significant differences

Sheppard (1992)	- 26 college freshmen	NO	10 weeks	- Content through requests for clarification
				- Form: indirect corrections
					- Students wrote 7 compositions on the same topic (multiple drafts) between the two compositions that were compared.
					- First and last compositions were compared:
					    1) Percentage of correct punctuation markers
					    2) Ratio of subordinations to the total number of sentences
						No significant differences
						Slight advantage for content group in the use of subordination

Ashwell (2000)	- 50 intermediate ESL students	YES	Multiple drafts (4) of one composition	- Content (D1) + Form (D2) Form (D1) + Content (D2) - Form + content (D1 & D2) Indirect form feedback (errors underlined or circled).	WRITING SAMPLES ONLY - One composition – multiple drafts (D1, D2, D3 and D4). All drafts and final version were assessed for accuracy. This assignment was the third of the year (the students had a total of 4 assignments to do). This experiment was carried out in a process-writing context. Therefore students were used to writing multiple drafts.	Simultaneous form + content group made largest gains in accuracy
Fazio (2001)[2]	112 grade 5 students	NO	5 months	- Form: direct corrections - Content:: comments - Form + content	WRITING SAMPLES + - Journal writing over a 5-month period, collected and corrected weekly. Students were encouraged to revise/correct. - Classroom observations - Interviews	No significant differences

---

[1] CG: control group
[2] Unlike other studies in this group, Fazio's subjects were primary school pupils.

Table 3.2

Studies comparing different strategies and techniques for providing feedback on form

Authors	*n* =	CG[1]	Duration	Treatment	Data Collection & measures	Results
Feedback on form – direct and indirect corrections						
Lalande (1982)	- 60 intermediate students of German	NO	5 essays (one every sixth class)	- Direct corrections - Indirect: errors coded	Writing samples + - 5 in-class essays (250 words done every 6th class. (essays 1 and 5 served as pre-test and post-test.)	Significant effects for indirect corrections over direct corrections
Robb & al (1986)	- 134 ESL students of Japanese L1	NO	23 weeks 5 essays (at regular intervals)	- Direct corrections - Indirect: coded - Indirect: marked but uncoded - Indirect: indicated in the margins but neither marked nor coded	Writing samples - 5 narrative compositions written at equal intervals during the academic year (23 weeks).	No significant effects for any type of feedback
Ferris & Roberts (2001)	- 72 ESL learners	YES	One essay	- Indirect: errors underlined and coded - Indirect: errors underlined	Writing samples + - One corrected essay given back to students 2 weeks later + 20 minutes to correct. Grammar Knowledge Questionnaire Grammar Knowledge Pre-test	No significant effects for any type of feedback
Chandler (2003)	- 36 ESL students in 1st – or 2nd-year music program	NO	5 essays (one every 2nd week)	- *Direct* corrections - *Indirect*: underlining with description of type of error - *Indirect*: description of type of error - *Indirect*: underlining only	Writing samples + - 5 essays collected and corrected every 2nd week. - Questionnaire on student preferences for feedback type	Significant effects for direct corrections over indirect corrections
Feedback on form – indirect corrections						
Ferris (2006)	92 ESL composition class students + - 3 instructors	NO	One semester	Same feedback to everyone: content feedback on 1st essay, and indirect corrections on subsequent four compositions	Writing samples + - 3 drafts of the 1st and 4th out-of-class essays - Interviews with teachers	Positive effects for indirect over direct corrections[2]
Feedback on form – direct corrections						
Bitchener & al (2005)	- 53 full or part-time ESL students	YES	12-weeks	- Direct corrections + teacher-student conferences - Direct corrections	Writing samples - 4 250-word texts	Positive effects for corrections + explanations on two linguistic features
Sachs & Polio (2007)	Study 1: - 15 ESL learners Study 2: - 54 ESL learners	NO YES	3 weeks 3 weeks	Study 1: - Direct corrections - Reformulations (recasts) - Reformulations + think aloud activity Study 2: - *addition of a control group*	Writing samples + - Revisions of a story - Think-aloud transcripts	Study 1: direct corrections were superior to reformulations Study 2: direct corrections were superior to reformulations
Bitchener (2007)	- 75 low intermediate EFL international students	YES	2 months	- Direct corrections + written explanations + oral lesson - Direct corrections + written explanations - Direct corrections	Writing samples - 3 picture description tasks (pre-test, immediate post-test, delayed post-test)	Positive effects for direct corrections, and direct corrections with written and oral explanations

---

[1] CG = control group

[2] Although teachers had agreed to provide indirect corrections only, they provided direct corrections or indicated errors without using the codes 60% of the time.

Appendix B –Consent Forms

le 5 septembre 2006

Chers parents,

Dans le cadre du programme d'anglais langue seconde au troisième secondaire P.E.I, nous allons faire un projet interdisciplinaire. Les élèves du P.E.I. auront la chance de correspondre par courriel avec des élèves de _____. Ces élèves étudient présentement en enseignement de l'anglais langue seconde et vont aider nos jeunes à améliorer leurs productions écrites en anglais.

Nous irons au laboratoire d'informatique une fois par cycle de neuf jours, de septembre à décembre. Si le temps nous le permet, les élèves de 1*U.Q.A.M. vont venir rencontrer les jeunes participants à la fin du projet.

Si vous avez des questions ou des commentaires, n'hésitez pas à me rejoindre à l'école au 371-2004 poste 320.

December 15, 2006

Dear Student,

I am presently conducting a study about how ESL teachers develop their beliefs and practices regarding the role of corrective feedback in helping ESL learners improve their accuracy in writing.

If you agree to participate, I will analyse your email exchanges with the ESL students, as well the response journals you were asked to keep as a requirement in your *Preparation for the internship at the secondary level*. The results will be used for research purposes only. Moreover, the results will be kept completely confidential and your name will not be used in any of the reports describing the findings of this study. It is understood that you can withdraw from the study at any time without any negative consequences.

Thank you,

Daniele Guénette

Consent Form

I hereby agree to participate in this study and consequently give permission to use the data collected during the semester as part of the Cyberscript assignments in the course *Preparation for the Internship at the Secondary Level.*

I am aware that the results will be used for research purposes only, that my identity will remain confidential and that I can withdraw at any time, if I so wish.

Name: _____   Signature: _____

Date: _____

Le 11 septembre 2006

Cher parent,

Projet cyberscript

Je fais présentement une recherche sur les techniques d'enseignement et de correction des erreurs employées par les futurs enseignants d'anglais langue seconde. Dans le cadre de ce projet élaboré en collaboration avec madame Poirier, l'enseignante de votre enfant, les élèves envoient leurs productions écrites à mes étudiants universitaires, de futurs enseignants d'anglais langue seconde, qui corrigeront leurs écrits et leur donneront des conseils et des suggestions pour améliorer leur anglais.

Dans la deuxième étape du projet (qui concerne uniquement les étudiants universitaires), j'analyserai les corrections apportées par les futurs enseignants et discuterai avec eux des meilleures stratégies à employer pour aider leurs élèves. Je sollicite donc votre permission pour pouvoir utiliser les textes rédigés par vos enfants et corrigés par mes étudiants, à des fins de recherche et d'analyse. Les résultats de cette recherche demeureront entièrement confidentiels et le nom de votre enfant ne paraîtra dans aucun rapport. Même si vous acceptez que les textes écrits par votre enfant soient utilisés, vous pouvez changer d'avis à n'importe quel moment et en avertir l'enseignant.

Si vous avez des questions sur cette recherche, n'hésitez pas à communiquer avec moi, par téléphone ou par courriel. Si vous donnez votre permission, veuillez signer le formulaire de consentement au bas de cette lettre et le retourner à l'enseignant de votre enfant.

Merci de votre collaboration,

Daniele Guénette
Professeure
987-3000, poste 1907

Formulaire de consentement

J'ai lu la description du projet et j'accepte que mon enfant y participe. Je comprends que les résultats de cette étude ne seront utilisés qu'à des fins de recherche, que l'identité de mon enfant demeurera confidentielle et qu'il peut retirer sa permission que ses textes soient utilisés à n'importe quel moment, s'il le désire.

_____   _____

Nom de l'élève   *Signature*

Le 11 septembre 2006

Cher élève,

J'enseigne à de futurs enseignants d'anglais langue seconde, inscrits dans le module d'enseignement des langues de l'Université XXX. Dans le but d'aider mes étudiants à développer leurs compétences en enseignement, tout en aidant des élèves du secondaire à améliorer leur anglais, madame Poirier et moi avons conçu un projet de collaboration entre nos deux groupes d'étudiants.

Tout au long de la première étape, mes étudiants-tuteurs vous aideront à corriger vos erreurs en anglais en faisant des commentaires et des suggestions appropriées, par le biais du courriel. À la fin de l'étape, je vous interviewerai pour connaître vos impressions et recevoir vos commentaires et suggestions concernant cette activité d'écriture.

La deuxième étape du projet concerne uniquement les futurs enseignants. J'analyserai les corrections qu'ils ont apportées à vos textes et je discuterai avec eux des meilleures façons de procéder pour aider les élèves à améliorer leur anglais. Je sollicite donc votre permission afin de pouvoir utiliser les textes que vous aurez écrits comme point de départ pour notre travail de réflexion et d'apprentissage.

Merci de votre collaboration,

Daniele Guénette
Professeure

Formulaire de consentement – Élève

J'ai lu la description du projet. Je comprends que les résultats de l'analyse des textes dans la deuxième étape du projet ne serviront qu'à des fins de recherche.

J'accepte: ☐   *Je n'accepte pas :* ☐

Nom : _____   *Signature: _____*

Appendix C – Questionnaires

SURVEY ON APPROACHES TO GRAMMAR AND CORRECTIVE FEEDBACK

_____

SECTION ONE : Information about yourself

Name _____   ❑ Male   ❑ Female

Year of birth _____

What is your native language?

         ❑ French

         ❑ English

         ❑ Other   Please specify : _____

If English is not your native language, how did you learn it?

         ❑ at home

         ❑ in primary school

         ❑ in high school

         ❑ in an immersion context (travelling, living abroad, going to a summer camp, etc.)

Do you speak languages other than English and French?

         ❑ No

         ❑ Yes   Please specify : _____

What language do you primarily speak at home (more than 80% of the time)?

         ❑ French

         ❑ English

         ❑ Other   Please specify : _____

Following are a number of statements that you may or may not agree with. We would like you to indicate your opinion after each statement by putting an **X** or a √ in the column that best indicates the extent to which you agree or disagree with the statement.

For example : **Contact lenses are the best invention of the 20th century**

❐	❐	❐	❐	❐	❐
strongly disagree	disagree	slightly disagree	partly agree	agree	strongly agree

If you think, for example, that there is something true about this statement but it is somewhat exaggerated, you can put an **X** or a √ in the fourth or fifth box.

SECTION TWO : Experience learning English in high school

#	Statement	1 strongly disagree	2 disagree	3 slightly disagree	4 partly agree	5 agree	6 strongly agree
1	ESL teaching in my high-school was grammar-focused.						
2	The language used in my classroom by my teachers was mostly English.						
3	ESL teaching in my high school was mainly explaining and practicing grammar rules.						
4	My teachers often designed activities to have us interact in English with our peers.						
5	My teachers never corrected our errors in class.						
6	Our focus in class was communication, but the teacher would occasionnally explain grammar points.						
7	I very seldom needed to speak in the ESL classroom.						

SECTION THREE : Approaches to grammar and corrective feedback.

#	Statement	1 strongly disagree	2 disagree	3 slightly disagree	4 partly agree	5 agree	6 strongly agree
8	When correcting students' written work, it is better to look at the content than to focus on linguistic accuracy.						
9	Students can learn grammar through exposure to language in natural use.						

#	Statement	1 strongly disagree	2 disagree	3 slightly disagree	4 partly agree	5 agree	6 strongly agree
10	Formal instruction helps learners to produce grammatically correct language.						
11	Teachers' feedback must focus on the appropriateness and not on the linguistic form of the student's speech (oral or written).						
12	Student use of language does not involve conscious knowledge of the grammatical system and how it works.						
13	Students can improve their grammatical accuracy through frequent practice of structures						
14	Teachers should correct all the grammatical errors students make.						
15	Students need a conscious knowledge of grammar in order to improve their language.						
16	Practice of structures must always be within a full, communicative context.						
17	Since errors are a normal part of learning, correction of grammatical errors is a waste of time.						
18	Separate treatment of grammar fails to produce language knowledge which students can use in natural communication.						
19	Students need to be consciously aware of a structure's form and its function before they can use it proficiently.						
20	All grammatical errors should be corrected in the students' written work.						
21	Decontextualised practice of structures has a place in language learning.						
22	Productive practice of structures is a necessary part of the learning process.						
23	Teachers should only correct student errors of form which interfere with communication.						
24	Grammar is best taught through work which focuses on message.						
25	Participating in real-life tasks with language is the best way for students to develop their grammatical knowledge.						
26	If grammatical errors are not corrected, this will result in imperfect learning.						
27	Students learn grammar more successfully if it is presented within a complete text.						
28	Comparison and contrast of individual structures is helpful for students learning grammar.						
29	If beginning students' errors are left uncorrected, it will lead to fossilization of errors.						

#	Statement	1 strongly disagree	2 disagree	3 slightly disagree	4 partly agree	5 agree	6 strongly agree
30	Grammar is best taught through a focus on individual structures.						
31	Explicit discussion of grammar rules is helpful for students.						
32	It is more beneficial for students to self-correct than to have the teacher correct their errors.						
33	Form-focused correction helps students to improve their grammatical performance.						
34	Teachers should only correct some of the mistakes students make in order not to discourage them.						

If there are aspects of grammar or corrective feedback that were not addressed in this questionnaire and that you feel are important, please feel free to comment.

_____

_____

_____

_____

_____

_____

_____

THANK YOU FOR YOUR TIME!

Appendix D – Journal

Journal Entries

Criteria for evaluation

- You must write at least 4 pages (in total).
- The questions above are there to guide you but you do not need to answer each and every one of them.
- You might find that some questions overlap and that you have answered one question in Journal Entry 3, while discussing Journal Entry 1. Don't worry about it - and don't feel the need to repeat yourself. Some entries might be shorter than others.
- **To be handed in December 18** (I suggest you start writing your thoughts as you go along.

Evaluation Criteria for the journal entries
CYBERSCRIPT

A	B	C	E
Content demonstrates depth of reflection. Point of view is stated clearly and explicitly. Arguments are relevant, supported, and well developed.	Content demonstrates the capacity for reflection. Point of view is generally clear and well stated. Arguments are well developed but not always supported.	Main ideas are sometimes difficult to identify. Arguments are inadequately presented or may be irrelevant or not supported.	None of the content demonstrates the capacity for reflection. No valid or pertinent arguments or examples.
Native-like performance in terms of textual cohesion, vocabulary, spelling, and syntax.	Very good control of English syntax. Fluent and coherent.	Many errors in English. Imperfect control of many structures but meaning is clear.	Errors (vocabulary, spelling and syntax) in most sentences which impede communication. Many difficulties with verb tenses

Journal Entry 1   **October 31**

Communication and motivation

How easy/difficult was it to establish communication with your students? Is the "anonymity"
of email an advantage or a disadvantage? Are students motivated to write? How would you
describe their attitude towards you and the task?

What about you – how do you feel about giving feedback to students you have never met?
Does it facilitate or hinder the type of feedback you provide, or the way you do it?

Journal Entry 2   **November 13**

Error analysis and identification

Looking at the errors that your students are making, can you identify their major problems
and what specific language notions should be addressed to help them improve? Have you
corrected all their errors? If not, which ones have you concentrated on and why? What
type(s) of corrective feedback techniques have you used, and why?

Journal Entry 3   **November 27**

Students' reaction to feedback.

Are students noticing your feedback and doing something about it? Have they progressed
since the beginning of the project? Do you find that your corrective techniques are
successful? Have you modified your way of giving feedback since the beginning? Do you
find that certain feedback techniques work better than others?

Journal Entry 4   **December 11**

Has this experience changed your way of looking at second language acquisition? Do you
find that corrective feedback on form helps students? What were the most challenging
aspects of this experience? Did you learn anything that will help you in your upcoming
practicum?

Appendix E – Interviews

Interview Protocol

Interviewee _____

Interviewer: _____

Date : _____

Thank you for agreeing to have this conversation with me regarding the collaborative project you were involved in in the fall. To facilitate notetaking, I will audiotape our conversation today. I will be the only one listening to these tapes which I will destroy after they are transcribed. I have planned this interview to last no longer than one hour. My objective is to understand how beginning teachers develop their practices in regards to error correction, an activity that is prevalent in the second language classroom.

Part One – Stimulated recall interview

In the first part of the interview (one-half hour) we will look at samples of texts that your high school students wrote, and your corrections. I will ask you to comment on the feedback strategies and techniques that you used.

Part two – semi-structured interview

In the second part of the interview, (one half hour), I will ask you to discuss and share your feelings regarding error correction – even if they are in contradiction with what you have been taught in your theoretical courses – without fear of being judged. We will look at your journal entries and I will ask you to comment or elaborate on some of your statements.

Questions for interviews with mentors

1. What issues should you consider when giving corrective feedback?

2. Can you comment on the following statement : Corrective feedback on form helps students become more accurate.

3. Can you comment on corrective feedback on form vs corrective feedback on meaning?

4. Can you talk about your motivation in giving corrective feedback on form?

5. Do you think the type of feedback provided makes a difference?

6. Should the same feedback be provided to all?

7. When you have your own classroom, what will be your practices regarding corrective feedback (on writing)?

8. If you hadn't been told to provide feedback on form, what would you have done?

9. What do think is the single most important factor to consider when giving corrective feedback?

10. How important do you think accuracy in writing is for secondary level students?

11. If you consider that accuracy in writing is important, what do you think is the most efficient way to get your students to develop their accuracy?

12. What is the role of the teacher in helping students develop their accuracy in writing?

Appendix F – Procedures and Instructions for the Mentors

CYBERSCRIPT PROCEDURE

Cyberscript messages	Deadline for sending message
First message	Thursday, September 21, 22h00
2nd message	Tuesday, October 3, 22h00
3rd message	Tuesday, October 17, 22h00
4th message	Tuesday, October 31, 22h00
5th message	Monday, November 13, 22h00
6th message	Monday, November 27, 22h00
7th message	Monday, December 11, 22h00

1. Create a *Dossier Parent* called CYBERSCRIPT PROJECT, and a *Dossier* for each student. Store everything you write and everything you receive (emails and attachments) in the FILE so that nothing is lost.

2. Students will send in their texts and messages by email. As soon as you receive a message from a student, transfer it to me (guenette.daniele@uqam.ca) and copy this message into a **Word Document**. Then store it in the appropriate folder.

3. When you copy the message from the student in a Word Document, **Save as** (*Enregistrer sous…*), using the following format :

    DAY_MONTH_NAME OF STUDENT_number of message

    Ex :

    22-10-Duguaynancy_1

    28-10-Tremblayjustin_2

    <u>**You must keep all original documents received by your students**</u>

4. As soon as you open a text to correct it, immediately **Save as** under the same name, but add the letters **CORR** in order to keep the original text sent by the student intact.

    22-10-Duguaynancy__1CORR

    29-10-Tremdlayjustin_2CORR

5. When you are finished with your corrections, save a copy of the document in an **RTF Format**. This is the document you will send as an attachment back to the students.

6. Send the text back to the student as an attachment to your email message. Write a personal message – comments, questions, suggestions, positive feedback – to encourage students to continue writing and create a bond with them.

7. **Send all the messages your send to your student (along with the attachment) to me as an UNDISCLOSED recipient (using Cci, in Outlook and Vidéotron, and Bcc in hotmail)**

8. You might want to encourage your students to correct their text and send it back to you, but do not insist. To ensure that they at least take a look at your corrections, comment on the text in your email message (i.e. *I really enjoyed this text but there's a part where I wasn't too sure what you meant …; Wow this is a really good story, I especially liked the part where… and I'd like to know more about….*).   Some students will correct and want you to take another look, and others won't. But the most important is that students keep on writing.

FIRST MESSAGE

You need to send your first message by Thursday, September 21.
You will send it to your students and to me simultaneously.

1. Introduce yourself, explain your role and establish personal contact. Say that your objective as a future ESL teacher is to help them improve their English by providing corrective feedback, comments and suggestions. Tell them that you wish to know some things about them – who they are, what they like and dislike, what their interests and hobbies are, what they think about the Cyberscript project, etc.

Appendix G – Writing Topics

WRITING TOPICS

- Do you think boys or girls have it easier?
- What do you like to do at recess?
- Do you think you have too many chores? If you could choose whichever chores you want, which ones would you prefer to do?
- What would you do if everyone in your family forgot your birthday?
- If you could travel in a time machine and go any distance into the past or future, where would you decide to go? Why?
- What makes our class special?
- If you could be invisible for a day, what would you do?
- If you could choose any bedtime you wanted, what time would you pick?
- Pretend that you were already grown up with children. How would you treat them differently from the way your parents treat you?
- Would you like to have an identical twin? What would be the best thing about it? What would be the worst thing about it?
- Are you excited to grow up? What does it mean to be "grown-up" and what do you think will be the best thing about it? What about the worst thing?
- Should teens be sexually active?

Topics to write about

- Surviving the divorce of your parents
- The Death Penalty
- Prejudice and Racism
- How important are sports in schools?
- Smoking
- How Our School Could Be Improved
- How a Car Changes a Teen's Life

What are your thoughts on …

- Prearranged marriages
- Competition
- Peer Pressure
- Gang Violence
- Part-Time Jobs
- Homework
- Honesty
- Curfews

Prompts:

1. When I need time for myself...
2. If I could live anywhere
3. I really miss...
4. I never expected...
5. An unusual day in my life
6. For my birthday I'd like...
7. The worst gift I ever got...
8. I daydream most about...
9. I really wish....
10. Something few people realize about me
11. I wish I weren't so...
12. One of my best points is...
13. One of my most important goals is...
14. I dream that one day...
15. My hardest class is
16. What makes me feel proud is
17. I'm glad I'm alive when
18. Some little things I often forget to enjoy

Appendix H – Results to the Pre- and Post-Questionnaires

Table 5.5

Changes in beliefs between the pre- and post-questionnaire

Item	Mdn	Student's t (Z)	Test Statistics (u)	p
Item 8	.50	1.07	1.0	.431
Item 9	.00	-1.23	-8.0	.343
Item 10	-1	-4.37	-22.5	.004
Item 11	0	1.00	4.5	.531
Item 12	0	-0.53	-11.5	.230
Item 13	0	-1.07	-4.5	.531
Item 14	0	0.66	6.5	.566
Item 15	0	-0.96	6.5	.328
Item 16	0	-0.22	-2.5	.875
Item 17	0	1.07	7.0	.437
Item 18	0	0.21	4.0	.808
Item 19	-.5	-1.80	-13.5	.141
Item 20	1	0.94	14.0	.213
Item 21	-.5	-1.53	-14.5	.176
Item 22	0	-0.69	-4.5	.727
Item 23	.5	1.38	15.0	.185
Item 24	0	-0.26	-1.5	.984
Item 25	-.5	-1.99	-14.5	.113
Item 26	-.5	-1.52	-11.5	.222
Item 27	0	0.76	6.5	.450
Item 28	0	-1.47	-8.0	.266
Item 29	0	-1.58	-10.0	.235
Item 30	0	0.23	2.5	.965
Item 31	-1	-3.71	-18.0	.008
Item 32	0	-0.67	-4.0	.672
Item 33	0	0.00	0.0	1
Item 34	0	-0.22	-0.5	1

Table 5.7

Changes in categories and levels between the pre- and post-questionnaires

_____

Pseudonym	Alpha code	No change	Changes in categories	Changes in levels
Nancy	A	3	5	3
Hugo	B	6	2	3
Lyne	C	4	3	4
Nadia	D	2	6	3
Thomas	E	3	2	6
Joanne	F	2	5	4
France	G	(absent on the day of the first administration)		
Victor	H	4	3	4
Étienne	I	3	4	4
Gina	J	5	2	4
Hélène	K	6	3	2
Odette	L	3	3	5
Nicole	O	2	6	3
Charles	Q	8	0	3
Gisèle	R	7	0	4

_____

Appendix I – Mentors' Corrective Feedback Techniques

Sample Texts

This is my text about adolescence:

My name is _____, I'm 14 years old. I went to do a short resume of my teenager.

I like to be teenager because I don't have a big responsability. I can enjoy of my life I can to be with my friends. I can to do planty activities with my friends and my boyfriend. I don't want to be an adult because they care to much responsability and they can't enjoy fully of your life.

This is that I think about adoslescence. For me, the adolescence is a best years of my life.

This is my text about adolescence: Hi !!! How are you ?
You will find my corrections in blue in your text. Be careful with the prepositions and the determiners you use; check their meaning before using them, same goes with your choice of words.
 My name is _____, I'm 14 years old. I went(Wrong tense) to do a short resume of my teenager(wrong word: you mean my teenage years OR my life as a teenager).

I like to be teenager because I don't have a *big responsibility(SX2) . I can enjoy of("of" not necessary here; I can enjoy my life) my life I can to("to" not necessary here; I can be with my friends) be with my friends. I can to(same thing, no "to" here either) do planty(S) of activities with my friends and my boyfriend. I don't want to be an adult because they care(wrong choice of word, see**) to(S) much responsability and they can't enjoy fully of your*** life.

This is **that**(wrong choice of word) I think about adoslescence(S). For me, the("the" not necessary here) adolescence is a(wrong choice of preposition) best years**** of my life.

* You should say: I don't have big responsibilities; the determiner "a" here means you only have one.

** We **HAVE** to much responsibilities, we do not "care" them.

*** THEY can't **fully enjoy** THEIR lives. (they = possessive their) +
    we do not say "enjoy fully" but "fully enjoy".

**** Adolescence is the best TIME of my life OR
    My teenage years ARE the best of my life.

My name is _____ and I like all sports. Today, I **write** a text on the twins. I don't want to be a twin because **all persons** don't remember who you are. **Are you this one or this one.** It's not funny, but it's not all the twins who are identical.

I have **an other** one for you. It is on the student**s** exchange. I want to do a student**s** exchange, but I never **do this**. I want to go at an English town like Vancouver, **calgary** or Edmonton. I want to do this **travel** because I want to talk in English perfectly. I **do** this for three or four month. It is not so long, but it is just **enough**t to learn English. In this town, I would play Hockey and Golf. **The** Hockey is my favourite sport with **the** golf. I want to do snowboarding at the **most biggest mont** in this town.

Great text! I really like what you wrote. You didn't make that many mistakes and the ones you made are easily correctable. I am pleased to see that you write a lot. This gives me a better opportunity to correct you and help you in further texts. I will give you one suggestion. Go over your text when you are done. This way you can avoid small mistakes and this helps a lot when you are in exams.

Comment: Are you writing a text now or you wrote a text.?

Comment: « Toutes les personnes » is not the same as all person, in English you could use people or different persons. It is important to be careful because from one language to another, it doesn't always mean the same thing!

Comment: Don't forget your question mark at the end of your question.

Comment: The word you are looking for is ANOTHER it's stuck together.

Comment: It is The student exchange, so no need to pu an S because it is one student exchange. I

Comment: If you are doing A student exchange, you do not need and S at student because it is one student exchange.

Comment: You would need to write I never did this, because do is used in the present.

Comment: Calgary is a city and needs a capital C just like Vancouver and Edmonton.

Comment: Travel is used when you are going somewhere, I am going to travel soon to another country. Trip is when you look at the whole as an ensemble.

Comment: You added a T at the end. ENOUGH

Comment: Don't need to use the, its ok to say I like golf and hockey.

Comment: By saying biggest, you don't to add the most. It is already intended in biggest. And mont is in French, mount is English.

Hi _____

Here are my corrections of your first written work. To correct your text I used blue codes. At the end of this document you can find the meaning of the codes to help you understand better. You can keep the codes for other writtings. At first you might think that there is a lot of colours but do not worry, it does not mean that your text is not good. Good luck!!!


```
                                   mw                                    p
Hi _____, today, it is my text ____ the twin. I want to be a twin,
             Vt              mw                vt
Because I liked the same ____ that him. He were my best friend and I
 vt (unnecessary)           vt                          vt
did of sport with him.We liked the same music and we had the same
                     vt            sp
friends. Finally, we did our homeworks together.

bye
```


Good text! It is clear and easy to understand. Also, you made few mistakes. To correct the verb tense (vt) mistakes look at how we use the conditional (le conditionnel) in Enlgish.

Your are right, having a twin would be fun when you want to play and do activities. On the other hand, I don't know if I would like to have another person looking just like me?

Continue, you are on the right track!!!

Correction Code

vf: Verb Form	vf e.g.: He <u>like</u> hockey.
vt: Verb Tense	vt e.g.: Yesterday I <u>go</u> to the restaurant.
ww: Wrong word	ww e.g.: I look <u>to</u> the clock.
wo : Word Order	wo e.g.: The <u>car blue</u> is parked.
wf: Word Form	wf e.g.: I am <u>oldest</u> than you.
mw(s): Missing Word(s)	wm e.g.: I like to <u> </u> chocolate.
sp: spelling	sp e.g.: I like <u>choccolat</u>.
p: Ponctuation	p e.g.: What is your name<u>.</u>
??: Meaning unclear	?? e.g.: (The guy bigger me not know.)

TWINS

The subitect of this day is twins. I don't want to have twins with me but I don't care to have it (my brother or my sister). But I have just one brother and it's not madder I'm happy with him.I have 2 friends twins and there is very funny and say some joke every time.

Correction:
Good job! Feel free to write me more!! I like to read!!

Green lines: verb use

Blue lines: orthography, spelling

Purple lines: order of words in a sentence, syntax

Student exchange

Hello Valérie! How are you? Me, I'm fine.

My plans for the weekend: Saturday, I have a family supper. Sunday, I'll relax and

Monday I'll play football in Montréal. Today, I have to talk about a student

exchange. If I ever have to do a student exchange, I would like to go to Europe,

precisely in Rome, Italie. I would have my apartment with another student who is

doing a student exchange. I would go to Italie for approximately 6 months. I want

visit all of Italie, eat good new food and make new acquaintances. I want to do an

extraordinary trip, to learn a lot. In Italie there are great universities where I would

like to study and do internships. I want to learn new languages and a new way to

live. My cousin did this for one year in Espagne and he liked it very much. Have

you or would you do a student exchange? Where and why? In your life, what trip

have you done and what places have you visited?

 Goodbye and see you next time!

You wrote an interesting text and I wanted to tell you that you are right when you say adults believe that the teen years are the best ones. However, when you are an adolescent, it is not always as fun as it looks like. I also wanted to tell you that I enjoyed reading your text and it reminded me how I was feeling at your age about growing up and becoming an adult. Believe me, I had the same preoccupations as yours concerning my own brother. When I look back at my adolescent years, I was always fighting with him but now, we are best friends. The funniest thing is that my friend and I sometimes discuss about how high school was the best time of our entire lives. Thus, I know your life is cool now but, don't be too anxious to become an adult and try to enjoy your youth.

I also appreciate your ending; it gives a philosophical twist to your text at the end and readers love this. There are a few mistakes in your text though that you should correct. First, when you use "a" in front of words starting with a vowel like "adult", these words need "an" in front of them. For example, we say "a car" and "an adult".

My name is _____, I'm 14 year old, I'm live in _____ and I'm small.

> **Comment:** Do you mean you're not tall or that you are young?

The teenage is the best period of their life, for the adults, for the teens isn't the best period. For me, is the day went I become grand (tall), becose now I'm small for my age. I love the music, but when I become a adult, I don't love the same music. I don't like my brother now, but later, I go love my brother.

> **Comment:** When you express something that is in the future, you must use « will »

My adolescence is a passage for the kid in(to) adult. It a adolescence is a gift for learn for a adult.

> **Comment:** Adolescence is a gift to learn from in order to become an adult.

Correction grid

Symbols	Meanings	Examples
SP	Spelling mistake	I eet chips…
S/V	Subject verb agreement	My teacher correct my mistakes.
VT	Verb tense error	They liking to play hockey.
WW	Wrong choice of word in this situation	I while do my homework.
P	Plural mistake	I play electrics guitar
Prep	Preposition mistake	I went on school
Pron	Pronoun mistake	I walked with his.
?	I don't understand	Moon black falls rapid?

If I could do a student exchange, I would like to go in several countries. I would like to go to Germany because in this country there is a lot of history like the jewish in the concentration camps, the fall of the Berlin wall,etc. I would like to go in England because I would like to see London and go play tennis at Wimbledon. In England, I could learn to speak English very easily. I think that if I can do this during one summer, it's sure that I would like to test this experience. For some time, my father and I think about the places where I can pass my summer. I really would like to go to Florida to play tennis at Bolletieri. It's one of my dreams beacause all the best tennis players went to this school. So, I would like to go after my secondary, studing in France.[1] I went to France last summer and it was a wonderful place. I want to see the museums and pass my week-end travelling a lot in each little city and see the old ancient memorials. Finally, I would like to travel in the most beautiful places in the world.

I'm impressed with your text. In general, your text is well written. Your sentences are well constructed except for a few mistakes related to verb tense. I have written some comments in your text giving you more information on some of my corrections. I'm happy to see that you have taken the time to write a longer text this time. It also shows that you have worked hard on your text. Excellent job!

> **Comment:** "Several" means more than one. Therefore, you need to write countries-use the plural form.

> **Comment:** The past progressive "I was going" describes an unfinished action. In your case, the action is completed. Therefore, you need to use the simple past "I went".

---

[1] I would like to go study in France after high school.

If I exchanged with another student in the world, I would prefer a French student. Many years ago, I dreamed to visit the Europe and France[2]. Over there, people talk the same language as us, in Quebec! Two weeks in Paris, would be enough for me, because I know it's long: in secondary 2, I visited Ecuador for two weeks.[3] In Paris, there are many activities. The principal activity is to visit the Eiffel tower. Other activities are the "Arc de Triomphe", the "Louvre", the "Seine", the "Champs-Élizées" and the "Jardins du Luxembourg". Two weeks in Paris for a student exchange, it's like so funny! I'm sure you love this idea, Alexandre. See you soon!

Your friend,

Here is how I would of written your text:

If I had an exchange with another student in the world, I would prefer a French student. Many years ago, I dreamed of visiting Europe and especially France. In France, people speak French just like us in Quebec. Two weeks in Paris would be enough for me. In secondary two, I visited Ecuador for two weeks and it was perfect. In Paris there are many activities. The principal activity is to visit the Eiffel tower. Other interesting activities to do are visiting the "Arc de Triomphe", the "Louvre", the "Seine", the "Champs-Élizés" and the "Jardins Jardins du Luxembourg". An exchange for two weeks in Paris would be so funny! I'm sure you love this idea Alexandre. See you soon!

I rewrote your text so that you can see my corrections more clearly. Although I have made quite a few changes, your text was very good. I can see a huge difference with your previous text on twins. There's a few problems related to verb tense ("In secondary two, I visit-*visited* Ecuador for two weeks"), but a lot of progress is done. Next time make sure all your verbs are in the right tense (past, present and future). Overall, you did a great job!

Wow! I liked this text a lot because you used a lot of very interesting words! As usual I made all my comments in green and my corrections in purple. I hope this helps you!

Here is your text:

If I had to do a student exchange, I would like to go in France, more precisely **(Wow! Good use of a great expression!)** in Paris. I always have dream to go ~~in~~ to Paris. It would **(Good! You used "would" correctly! I'm happy!)** be the ideal opportunity. I would like ~~well~~ **(The expression "j'aimerais bien" does not exist in English)** to stay in Paris at least **(Wow! Good word!)** one month ~~for~~ to really **get** to know my new family and my new friends and ~~for can~~ to

Comment: Start a new sentence.

Comment: Past action. " I visited Ecuador" since your visit was in the past.

Comment: Start a new sentence.

---

[2] Many years ago, I dreamed of visiting Europe and especially France.
[3] In secondary two, I visited Ecuador for two weeks and it was perfect.

adapt myself at Parisian way of life **(Great expression, I'm very impressed)**. Like you already know, I adore to go cycling, so, it would be the ideal opportunity for me to go cycling in the Alps. See the magnificent scenery, it would be extraordinary for me! But, I would have to train very strong! Also, **I could can (I'm not sure I understand this, maybe it is just an error in choice of words)** where is the "Tour de France". I would like that my new family gives me a warm welcome~~s~~ and that it make **me** visit the most beautiful spot of Paris. I would like to go at "Le cimitière du Père Lachaise", at "Le musée du Louvre", in the Montmarte area and at the beach. I would adore to do a student exchange. It would be the opportunity to learn and to visit a new city!

My additional comments:

I must say I am truly impressed by your text. You used great words, such as "precisely", "ideal", "magnificent" and "scenery" correctly and it gave a lot of strength to your text. Your text is colourful and very well built. I was also very happy that you corrected yourself by using "would" appropriately and that is great! Most of the mistakes you made are very common. I admire your courage to try to use different words and this is what makes your text unique!

Halloween

Hello! I write you this message about a celebration which I like much: Halloween!

This day is very important for me... because I like to eat candies. I am crazy of all that is sweetened. The word should be SWEET; 'sweetened' is something to which you added sugar. Even if I am not any more a child, I like to walk in the streets the evening of October 31 and to return (at) home return home with bags filled with sugar refineries! = raffineries???

I like also to disguise me disguise myself OR wear costumes. I find that very amusing. This day enables us to become what we want. It is enough only to a little creativity. I still don't get it…sorry.

This year, I envisage (you can say: I plan) to go at to (you go TO a place) school disguised in afternoon and danced -why use the past tense? with my friends. We will have fun. Then, after having to collect collected hundreds of candies, I will go at to my best friend's -(to indicate you're going at your best friend's house) to finish the evening in front of the TV, watching horror movies.

And yes, one of my favorite activities in on Halloween day is to pass hours (we SPEND hours – time, weekend etc, NOT pass… and, we also spend money) in front of the television (to) and hide (me) – here you can say: and hide behind or and hide myself behind behind a cushion (lol). I like also to frighten (me) myself while leaving some plays as *Ouija*, not sure; do you mean: while playing Ouija? in which we try to call the spirits. I am not a very timorous girl!

In short, for me Halloween is a celebration which I do not absolutely not miss(ed)!... Again, why use the past tense? I hope that you like this day as much as me!

Now, this is my text on : Student exchange

Me, for student exchange, I wouls (SP) like to go in Spanish countries or in English countries ~~for~~ to become better in these ~~this~~ languages. I would like to be there mayby (SP) two months or more. I would like to do activities with my welcoming family because it's very important for me. I would like to visit the country to ~~for~~ learn advantage (lex:do you mean "more" or the "advantages"?) on it. I would like to learn customs of this contry (SP) and interestings things of it. But, I would not like to go in French contries (SP) because I want to learn another ~~an other~~ language and my mother tongue is French.

I would like to do many student exchange because I love to travel and it's an excellent manner (Lex) to travel. I have am (V) already went in Ecuador, in different provincial (Lex) of Canada like : Ontario, New-Brunswick and Prince-Edouard-Island. I went too a lot in Quebec. I LOVE to travel . I want to do this all my life!

I wait for your other mail impatiently!

Again, Great Work! You write very and you do not make major mistakes. Be careful if you use a French/English dictionary when writing because the first translation is not always the best. A couple of your mistakes are because you're translating directly from French to English (e.g. "manner" for "manière" but it's not the right choice of word in this context). Don't worry, this type of mistake because of translation is VERY normal. :o)

SV : Subject-Verb agreement

SP : Spelling
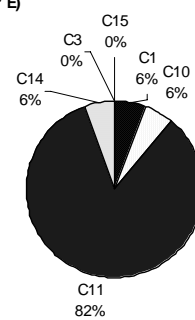
Lex : Lexical (wrong choice of word)

VT : Verb tense

V : Verb = wrong choice of verb
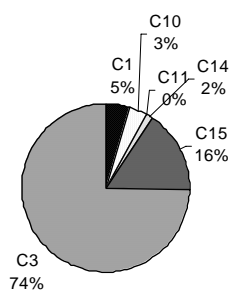
Appendix J – Mentors' Corrective Feedback Behaviour
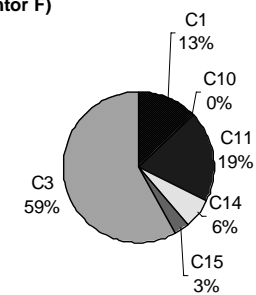
Nancy (mentor A)
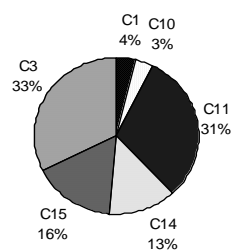
C1 4%
C10 3%
C3 33%
C11 31%
C15 16%
C14 13%

Thomas (mentor E)

C15 0%
C3 0%
C14 6%
C1 6%
C10 6%
C11 82%

Hugo (mentor B)

C10 3%
C1 5%
C11 0%
C14 2%
C15 16%
C3 74%

Joanne (mentor F)

C1 13%
C10 0%
C11 19%
C3 59%
C14 6%
C15 3%

Lyne (mentor C)

C3 8%
C1 6%
C10 6%
C11 8%
C15 35%
C14 37%

France (mentor G)

C11 1%
C10 2%
C14 8%
C1 2%
C15 4%
C3 83%
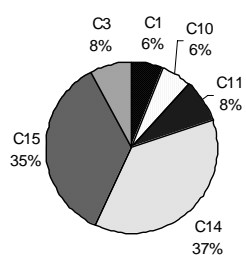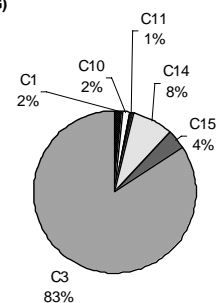
Nadia (mentor D)

Victor (mentor H)
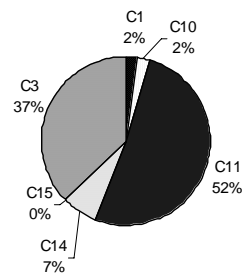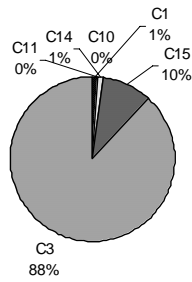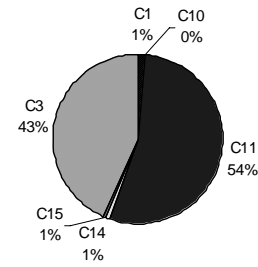
C1 2%
C10 2%
C3 37%
C11 52%
C15 0%
C14 7%

Étienne (mentor I)

C1 1%
C14 1%
C10 0%
C11 0%
C15 10%
C3 88%

Nicole (mentor O)

C1 1%
C10 0%
C3 43%
C11 54%
C15 1%
C14 1%

Gina (mentor J)

C10 3%
C1 0%
C11 3%
C14 0%
C15 8%
C3 86%

Charles (mentor Q)

C14 1%
C10 5%
C1 0%
C15 2%
C11 0%
C3 92%

Hélène (mentor K)

C10 1%
C1 5%
C11 4%
C14 5%
C3 51%
C15 34%

Gisèle (mentor R)

C1 4%
C10 1%
C11 13%
C14 9%
C15 8%
C3 65%

Odette (mentor L)

C10 6%
C1 4%
C11 6%
C14 3%
C15 13%
C3 68%
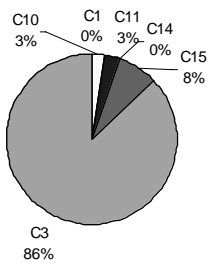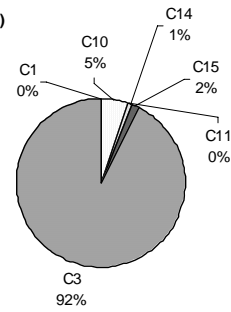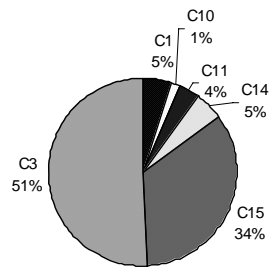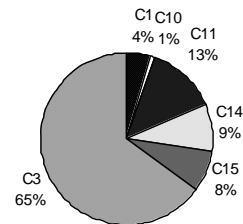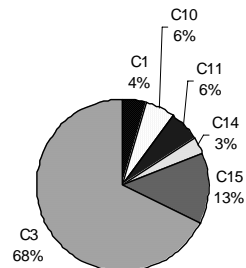
Figure 4.7 Mentors' error correction behaviour

_____

Legend :

C1	=	Clarification requests
C3	=	Direct corrections
C10	=	Indirect corrections
C11	=	Indirect corrections coded
C14	=	Indirect corrections with comments
C15	=	Direct corrections with comments

_____

277