UNIVERSITÉ DE SHERBROOKE

Faculté d'éducation

**Améliorer la qualité de l'ALS au Cégep par la**

**CMO synchrone écrite avec des anglophones**

**Improving CEGEP Students' ESL Accuracy through**

**L1/L2 Synchronous Text-based Screen-Sharing Tasks**

par

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**ABSTRACT**

CEGEPs are now reaping the 'first fruits' of the last Educational Reform in Quebec and as a result, 'English as Second Language' (ESL) teachers are noticing an improvement in fluency and a seemingly lower level of inhibition when it comes to production skills. However, this output is accompanied by a noticeable lack of accuracy. Keeping in mind that the purpose of language is communication, we need to find a way to reduce the number of basic common errors made by CEGEP ESL students, while maintaining a natural and motivating learning environment. Thanks to recent advances in computer-mediated communication (CMC), we now have the necessary tools to access peer native speakers throughout the world. Although this technology can be used for other language courses, this study explored the potential value of collaboration with native English speakers through the use of synchronous screen-sharing technology, in order to improve CEGEP ESL students' accuracy in writing. The instrumentation used consisted of a questionnaire, tests, plus documents of collaborative tasks, using the 'Google for Education' screen-sharing tool. Fourteen Intermediate/Advanced ESL CEGEP students participated in this study. Despite the positive tendencies revealed, only a prolonged use of the innovative method yielded a significant positive impact. Moreover, a mixed linear regression for the group with more L1 intervention revealed a significant correlation between the number of errors in the task documents and the number of tasks accomplished. Thus, it could be inferred that ESL accuracy improves in proportion to the number of synchronous text-based screen-sharing tasks done with L1 collaboration.

# RÉSUMÉ

Les cégeps récoltent maintenant les «premiers fruits» de la dernière réforme de l'éducation au Québec. Les enseignant(e)s en anglais langue seconde (ALS) remarquent une amélioration dans le débit et la spontanéité d'expression orale et écrite. Cependant, la qualité de la langue a diminué, étant accompagnée d'un manque de précision grammatical. Étant donné que le but fondamental d'une langue est la communication, il est indispensable de trouver un moyen de réduire le nombre d'erreurs de base faites par les cégépiens en ALS, tout en maintenant un environnement d'apprentissage naturel et motivant. Grâce aux progrès récents dans la communication médiatisée par ordinateur (CMO), les apprenants ont maintenant accès à des pairs à travers le monde. Bien que cette technologie puisse être utilisée pour d'autre cours de langue, cette étude a exploré le potentiel de la collaboration avec des pairs anglophones, en utilisant la technologie de partage d'écran synchrone, afin d'améliorer l'apprentissage de l'anglais langue seconde (ALS) au cégep, notamment, la précision dans le langage écrit. Les outils employés consistaient d'un questionnaire, des tests, ainsi que les documents de tâches collaboratives faites avec l'outil de partage d'écran, *'Google for Education'*. Quatorze cégépiens, en ALS de niveau intermédiaire/avancé ont participé à cette étude. Malgré les tendances positives démontrées, seule une utilisation prolongée de la méthode innovante a reflété un impact positif significatif. En outre, une régression linéaire mixte pour le groupe avec plus d'interventions par des pairs anglophones a révélé une corrélation significative entre le nombre d'erreurs dans les documents et le nombre de tâches accomplies. Il peut donc être déduit que l'amélioration de la qualité de l'ALS agis proportionnellement au nombre de tâches réalisées en collaboration avec des pairs anglophones.

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| | |
|---|---|
| CEGEP | *Collège d'enseignement général et professionnel* (College for Pre-university and Professional Education) |
| CMC | Computer-Mediated Communication |
| CMO | *Communication médiée par ordinateur (communication virtuelle, cyber communication)* |
| ESL | English as Second Language |
| FLA | Foreign Language Acquisition |
| ICT | Information and Communication Technology |
| L1/L2 | First-Language speaker and Second-Language Learner |
| SCMC | Synchronous Computer-Mediated Communication |
| SLA | Second Language Acquisition |
| UdeS | *Université de Sherbrooke* |

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# CHAPTER ONE
# INTRODUCTION

1    RESEARCH CONTEXT

Which English as Second Language teacher has not experienced the frustration that comes from having to repeatedly deal with the same basic recurring errors? For CEGEP ESL teachers in the province of Quebec, this problem has become even more prevalent as we reap the first fruits of the last educational reform, which focused on production rather than accuracy in Second Language acquisition. CEGEP ESL students often blame their struggle with fossilized errors and other common errors on this lack of emphasis placed on accuracy in secondary school.

## 1.1    The Philosophy behind the Problem

Although this reform is recent, the philosophy behind it is not. In fact, it lines up with Steven Krashen's 'Natural Approach', which was popularized back in the 80's. This American professor declared that "Language acquisition does not require extensive use of conscious grammatical rules …" (1983). More specifically, he claimed that "Acquisition requires meaningful interactions in the target language - natural communication - in which speakers are concerned not with the form of their utterances but with the messages they are conveying and understanding" (ibid). Admittedly, providing our students with opportunities for authentic meaningful communication is ideal for second language learning (SLL). After all, the purpose of language is to communicate and like any skill, developing it requires abundant practice. But, which parent would give their car keys to a child who has no theoretical knowledge of the rules and regulations of driving and tell them to go practice? The result of not focussing on form, as we are now seeing, is 'a lot of bad habits', and in our profession, we are constantly reminded that trying to undo this damage requires

much more time and effort than progressively applying damage control along the way. The well-known adage, an ounce of prevention is worth a pound of cure, applies here. Furthermore, like with any subject, learning solely through trial and error is much less efficient than combining opportunities for practice with comprehension of rules. As usual, balance is the key. On the one hand, if we have too much focus on correct grammar, it can prevent learners from venturing out and making any attempts at communicating. On the other hand, however, we have our present day CEGEP students whose ability to communicate in English is hindered by their lack of accuracy. CEGEP ESL teachers expect students to arrive in their classes with a solid foundation including a clear understanding of basic grammar rules (Appendix B), as well as having memorized essential elements such as irregular verbs. This can then allow us to build on this foundation, keeping in mind that ultimately, this theoretical knowledge needs to be used in context in order for real learning to occur. Unfortunately, Krashen's followers have tended to 'throw the baby out with the bathwater', so to speak. Some have even gone so far as to refuse to point out or correct errors and are reluctant to give their students grammar rules or explanations for fear of interfering with the subconscious process. In the preface of their book, *'The Natural Approach'*, Krashen and Terrell (1983), claim that they based their approach "on an empirically grounded theory of second language acquisition". Yet, as one workshop speaker declared "Krashen has crashed" (M. Hashemi, personal communication, May 2014). He went on to explain that Krashen's methods have, in fact, been proven ineffective. Indeed, we are regularly faced with similar evidence in our ESL classes. Although it cannot be denied that our students can now produce language, both written and oral, more proficiently then in past years, these productions are so generously sprinkled with basic errors that coherence and comprehension are affected and thus, communication is hindered. Clearly, we need to ask: Is accuracy important?

## 1.2    The Future of the English Language

What will become of the English language? This question reflects the urgency of the problem of inaccuracy in ESL learner production. In dealing with the subject 'The Future of English', expert David Crystal explains how rapid changes are affecting the language. In his interview with Joanna Westcombe (Spotlight 9 / 11), this linguist, reports that there are now more non-native speakers of English in the world than native speakers. "Of the two billion people in the world who use English, only some 400 million are native speakers. The remaining 1.6 billion are speakers of English in countries where the language has some sort of official status…" (ibid). According to Carla Meskill (2005), "The number of children in U.S. schools for whom English is their second language is nearing five million and growing". When we consider that our students, along with all the other learners of English, make up four fifths, or 80%, of the English speakers in the world, we have to wonder what will become of this language if accuracy is ignored. It is especially worrisome because, unlike French and many other languages in the world, English has no regulating body, such as *l'Academie de la Langue Française*, for instance, which, since 1634, has been acting as an official authority of the French language. Indeed, as ESL teachers, we need to find a solution for dealing with the problem of ESL inaccuracy. We need a method that will enable our students to overcome their 'bad habits' of making basic common errors[1]. How can we provide ways for them to overcome fossilized-errors and inaccuracy handicaps? How can we best reach this clientele and show them the need for accuracy in their language production? How can we keep them active and motivated while they focus on improving their ESL communication skills?

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[1]*Basic Common Errors (see appendix B for complete list)*

**1.3    Addressing the Problem of Inaccuracy**

Clearly, our focus now needs to be on accuracy. Increasing accuracy refers to minimizing basic common errors in language production (Appendix B). Basic grammar and syntax errors are errors that a native speaker would immediately recognize as inaccurate or incorrect language, often resulting in obscure meaning or incoherence. For instance, a typical example of L1 interference in 'Count versus Non-count Nouns'; would be the use of 'hairs' rather than 'hair'.In fact, these errors tend to reflect a lack of integration of the very grammatical elements that have been repeatedly covered in previous courses and that we, as CEGEP ESL teachers, generally expect our students to be able to apply in their speaking and writing. (Complete list in Appendix B). Thus, errors reflecting a lack of integration of these elementary English language notions are considered unacceptable and students are thus penalized for making such errors in their evaluations. Often, we are dealing with fossilized errors due to repeated incorrect use, having developed into 'bad habits', which may even sound correct to the user. Obviously, it is high time to address this problem and look for solutions. As we know, the Quebec Ministry of Education has placed a great deal of emphasis on revision strategies in the past few years; and rightly so. As a matter of fact, some CEGEP English courses require that the students be evaluated on their ability to apply revision techniques, thus forcing students to recognize basic errors and correctly reformulate their sentences.

Another competency that is now included in many of our CEGEP courses involves the use of Information and Communication Technology (ICT). This is well-adapted to the Generation $C^2$ clientele of today, where a passive learning environment is not ideal. Indeed, we no longer live in an age of passive consumers of information. Our students expect to be actively involved in the transfer of information. Thanks to

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[2] People in the age group 18 to 34, who make a lot of use of social media and so are considered to be connected (Macmillan Dictionary)

communication technology with its limitless web networks, consumers can now also be producers. Moreover, two-way interaction is now possible with native speakers throughout the world. Indeed, ICT makes interaction with peers of other languages and cultures a viable option today. In fact, it allows language students to travel beyond classroom walls by having the entire world literally, at their fingertips. According to Lehtinen et al. (1999, p.2), computer-supported collaborative learning (CSCL) is one of the fastest growing areas in technology and "one of the most promising innovations to improve teaching and learning…". No doubt, ICT offers some very interesting solutions when we consider the ongoing issues of group size in our educational institutions, where an educator cannot realistically provide sufficient feedback to each individual. Through the use of CMC tools, language learners can benefit from an abundance of peer experts, to help each individual improve their accuracy in an authentic, motivating communication environment.

This study explores the potential value of a synchronous CMC writing tool and it investigates whether it could be a viable solution for the problem of CEGEP students' inaccuracy in ESL production.

The following components will be presented in this paper. Chapter two presents the socio-cognitivist and constructivist framework of the study, followed by the specific questions addressed. Chapter three gives an overview of the research that already exists in this field and chapter four explains the methodology that was used for the study. In chapter five, we have a presentation of the findings, which are then summarized and discussed in chapter six, followed by some concluding remarks.

# CHAPTER TWO
# CONCEPTUAL FRAMEWORK

1    COGNITIVISM, SOCIO-COGNITIVISM AND CONSTRUCTIVISM

This study involved a scenario that adhered to a socio-cognitivist and socio-constructivist philosophy with a high level of learning (Appendix A). Firstly, it was rooted in cognitivism, where knowledge is actively constructed by learners in response to interactions with environmental stimuli as well as in social cognitivism and social constructivism, where candidates negotiate and create meaning through interactions with peers, while accomplishing text-based collaborative tasks. Socio-constructivists such as Dillenbourg et al. (1997) and Paiva (1998) claim that it is through interaction with peers, and by comparing one's views with those of others, that learning occurs. Furthermore, several peer reviewed studies have shown that when there is a deficiency in social interaction, learning and development are obstructed (Bransford, Brown, and Cocking, 2000), hence, the advantage of benefiting from on-line pair activities made possible through technology today.Naturally, social constructivism emphasizes the collaborative nature of learning since, after all, its creator, Vygotsky, deemed it impossible for true learning to occur outside of social interaction.

## 1.1    Collaboration

Socio-constructivism, in the form of peer collaboration, is one of the key elements in the theoretical framework for effective language acquisition through CMC, and this is apparent in the literature. Given that collaboration is defined as "a co-ordinated, synchronous activity that is the result of a continued attempt to construct and maintain a shared conception of a problem" (Teasley, S., & Rochelle, J. 1993, p. 235), the tasks assigned to the students need to be broad and flexible enough to allow for freedom and creativity so that the focus is not on just getting an

assignment done, but rather on accomplishing the task through the use of language, as a tool for communication, in a way that is as accurate as possible in order to be properly understood.

### 1.1.1  Tandem Learning

More specifically, this study will deal with tandem peer collaboration. In their Case Study: Language Learning in Tandem, Sandra Truscott and John Morley (2003, p.149) define Tandem Learning as "a reciprocal programme in which students are paired to work on tasks of mutual interest". One obvious advantage of pair work over larger group work is that there are more opportunities for each individual to contribute. Moreover, the fact that the responsibility of getting the task done is shared by only two people can be a motivating factor.

To sum up, tandem collaborative activities provide a socio-cognitive and constructivist platform for authentic communication whereby language acquisition can occur. The recent technological advances in synchronous computer-mediated communication (SCMC) tools, which are now readily available and accessible from computer labs, PCs, iPads and iPhones, make it possible to create a design for this ideal collaborative environment.

### 1.1.2  Synchronous Computer-Mediated Communication (SCMC)

It is indeed important to make a clear distinction between asynchronous computer-mediated communication (ACMC), where there is a required delay in the interaction, and synchronous computer-mediated communication (SCMC), which occurs in real-time. One major advantage of synchronous interaction is the instantaneous feedback possibility. Typically, whether it be in a classroom context using hard copies or using electronic documents or email, the asynchronous model means that students wait, sometimes even weeks, before seeing their errors. Another

lapse of time occurs between the moment when they attempt to correct the error and the time when they receive confirmation of correctness or incorrectness. These delays are obviously not efficient. Indeed, recent new synchronous screen-sharing technology makes it possible for educators to create an ideal socio-constructivist collaborative environment, where each student can benefit from the expertise of a native speaker while engaging in real time authentic communication.

### 1.1.3  Language Acquisition and the Input Hypothesis

"The Input Hypothesis states that we acquire language by understanding messages, that 'comprehensible input' (CI) is the essential environmental ingredient in language acquisition" (Krashen, S. 1991). Not surprisingly, much research shows that Foreign Language Acquisition (FLA) requires sound instruction accompanied by meaningful input and intake of the target language, presented in a contextualized manner that ideally, allows the learner to connect personally (Curtain & Dahlberg, 2004; Omaggio Hadley, 2001). Unfortunately, what we often consider 'authentic' often ends up being a manipulated version of reality. With this in mind, thanks to the technological advances in ICT tools, FL teachers can now conceive on-line pair activities that incorporate both truly authentic communication and language acquisition tools.

### 1.1.4  Scaffolding and the Zone of Proximal Development (ZPD)

This leads us to instructional scaffolding, a learning process tailored to a student's needs, whereby sufficient support is provided to promote a deeper level of learning (Sawyer, 2006). Vygotsky's concept of the zone of proximal development (ZPD) is an important construct in the theory of scaffolding instruction. ZPD basically refers to the level of potential development. It is a zone between what a learner can do by himself (expert stage) and what can be achieved with the support or guidance of a knowledgeable peer or instructor (pedagogical stage) (Ellis &

Worthington, 1994). In this study, SCMC pair activities function as a vehicle through which ESL students can acquire higher levels of language accuracy by applying their prior theoretical knowledge with the support delivered by peer experts. The peer expert provides support by pointing out basic errors, helping out when necessary, and of course by modeling. Ideally, the amount of intervention needed should diminish as the learner progresses and perfects his/ her language production. It is important to note that these techniques for improving language accuracy naturally lend themselves to written activities.

## 2 LEVELS OF LEARNING

In the field of education, regardless of the subject, a primary concern for educators ought to be the level of learning achieved through the activities proposed. Due to the nature of authentic communication tasks involving creativity and problem-solving skills, a high level of learning can be achieved. In fact, taking advantage of the opportunities offered through the use of ICT, authentic problem-solving tasks can be designed which require all of the levels in Bloom's taxonomy (Churches, 2007): remembering, understanding and applying the theory learned, as well as analysing, evaluating and creating, the latter being the highest level of Bloom's Digital Taxonomy of learning (Appendix A)**.**

In conclusion, Synchronous Computer-Mediated Communication (SCMC) offers many opportunities for mother-tongue speakers and second-language learners (L1/L2) to accomplish authentic cross-cultural tasks. Using an ICT tool for screen-sharing activities allows ESL students to interact simultaneously in written form with partners across the globe. While incorporating the ministry criteria for cultural awareness, the use of ICT and revision strategies, these active collaborative learning possibilities target high levels of learning and are highly motivating, not to mention an excellent platform for emphasizing the importance of accuracy in a natural setting.

3    RESEARCH QUESTIONS

Indeed, CEGEP students' inaccuracy in ESL production is a major problem, however, thanks to recently accessible SCMC tools we can create an ideal socio-constructivist collaborative environment where students could benefit from the expertise of a native speaker (peer expert). Moreover, they can be exposed to comprehensible input in authentic conversation situations (Krashen, 1983), while accomplishing meaningful, problem-solving tasks, where the focus is on form as well as content (Vygotsky). This could then promote high levels of learning, (Bloom, Appendix A), in ESL acquisition and lead to more accurate communication.

Based on the theories mentioned in the Conceptual Framework, this study addressed the question of whether doing written SCMC tasks with a partner whose mother tongue is the learner's target language, can solve the problem of basic common reoccurring errors in ESL CEGEP students' language production. More specifically, the following three questions were investigated:

1.    Is using a SCMC[3] L1/L2[4] written interactive task method with peer expert intervention effective in increasing accuracy[5] in CEGEP ESL students' written production?

2.    Is using a SCMC L1/L2 written interactive task method with peer expert intervention more effective than an L2/L2 written interactive task method with non-expert peer intervention in increasing accuracy in CEGEP ESL students' written production?

3.    Is using a SCMC L1/L2 written interactive task method with peer expert intervention effective in increasing accuracy in CEGEP ESL students' written production after an interruption of 8 weeks?

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[3]SCMC: Synchronous Computer-Mediated Communication
[4]L1/L2: Mother-tongue speaker and second-language learner
[5]Accuracy: minimizing basic common errors (Appendix B)

**CHAPTER THREE**
**SUMMARY OF FINDINGS IN THE LITERATURE**

1 INTRODUCTION

Drawn from a socio-cognitive, constructivist and cognitive-interactionist conceptual framework, peer-collaborative activities using computer-mediated communication (CMC) for language learning have been the topic of numerous recent studies. In order to effectively treat what has been researched in this vast, the following major elements were selected: text-based CMC, peer collaboration and synchronous CMC.

**1.1 Target Population and Discipline**

The majority of the studies in this review dealt with Foreign Language (FL) acquisition for high school, college and university students, thus a clientele that is similar in age and purpose to what we find in Québec CEGEPs.

**1.2 Overview of Computer-Mediated Tools**

Much of the research that has been done on using CMC for language acquisition has dealt with either, written asynchronous modes, such as emails (Tella, 1991, 1992a, 1992b; Barson, Frommer, and Schwartz, 1993; Vinagre, 2005), or using synchronous oral tools like skype and WebCT options (Barron & Black, 2015; Truscott & Morley, 2003). However, **synchronous text-based** communication has only quite recently arrived on the scene, and so far, appears to have been the topic of mostly qualitative studies.

**1.3 Qualitative & Mixed Methods versus Quantitative Research**

The main focus of the qualitative research has been students' participation patterns and attitudes toward online correspondence (Belz, 2002; Ware, 2005). In particular, numerous qualitative studies have explored the aspect of intercultural exploration (Belz, 2003; Furstenberg, Levet, English, & Maillet, 2001; Liaw, 2006; O'Dowd, 2003). Some of these studies used mixed methods, where for instance, a questionnaire or survey gave a glimpse of motives or feelings and perspectives behind quantitative results. One particular qualitative study showed the importance of emphasizing accuracy and not just meaning in SCMC assignments (Fiori, 2005). Bower and Kawaguchi (2011) focussed on the rates of error correction in text-based SCMC, both for English and Japanese.

2      TEXT-BASED COMPUTER-MEDIATED COMMUNICATION

In written SCMC, the increase in processing time and opportunities to look back at what was previously written, both by the L1 and L2, offers a major advantage over oral interaction. Applying feedback, modeling the native speaker or avoiding previous errors is much more likely, without interrupting the flow of communication. As Smith claimed:

> Indeed, synchronous CMC may provide an ideal medium for students to benefit from interaction primarily because the written nature of computer-based discussions allows a greater opportunity to attend to and reflect upon the form and content of the message, while retaining the conversational feel and flow as well as the interactional nature of verbal discussions (Smith, 2003, p.39).

A meta-analysis based on experimental and quasi experimental studies done between 1990 and 2012, reported on the overall effect of text-based SCMC on SLA, showing that this means of CMC was indeed more effective (Lin, Huang, & Liou, 2013). Furthermore, according to this study, educators should favour weekly

assignments in pairs or small groups. The authors also point out the need for more detailed descriptions of SCMC tasks in articles in order to accurately measure the effectiveness of SCMC on SLA.

Researchers have explored two main aspects of text-based CMC; emails and tandems.

## 2.1    Emails

A vast majority of prior educational research in the area of text-based CMC has involved emailing. Tella (1991, 1992a, 1992b) carried out an ethnographic study based on a semester-long series of email exchanges between several high school classes in Finland and England. Observations such as the following were noted. Learners became less dependent on their teacher and an environment was created where the focus was more on the individual rather than on the group. Also, the content became more student-tailored rather than simply following a syllabus. The email communication was ideal for practicing natural communication including idioms, expressions, the sharing of ideas and even natural occurrences of editing and revision. Furthermore, the participants increasingly made use of peer tutoring and other collaborative methods in order to compose their email messages together. "The quality of writing improved as writing changed from teacher-sponsored and led, only to be marked and graded, to real-purpose writing with genuine audiences around the world" (Tella, 1992b).

Another email project was carried out jointly between a university in Madrid and the University of Massachusetts, where English and Spanish speaking students worked with a partner exchanging personal, linguistic and sociocultural information and corrected each other's language as well as taking part in a discussion forum. The project appeared to be quite successful, however, it was concluded that further research needs to be done on how best to assess the improvement of the students' language proficiency through the use of email tandem (Vinagre, 2005).

**2.2    Tandems**

Tandem learning allows language learners to be paired up with native speakers. Aside from providing opportunities for authentic interaction in the second language, both partners have access to a peer expert. Although this study only concerned one partner within the tandem pair, research findings dealing with tandems are nevertheless relevant since they generally examine the dynamics involved in accomplishing authentic tasks with native speakers, who can give feedback.

Brammerts' article, Language Learning in Tandem Using the Internet (1998), describes the International E-Mail Tandem Network, where universities from more than ten countries have been working together since 1994. Appel, and Mullen (2000), point out the pedagogical value of tandem learning which provides opportunities for active communication with native speakers. However, they note that data collection problems have made research in this area difficult.

Indeed, many advantages have been attributed to the successful results of authentic communication with a native speaker, who can continually offer corrections or assistance.

It is individualized and autonomous learning and each partner decides for himself/ herself what s/he learns, when s/he learns and how s/he learns. It is cooperation between members of different cultures… not to mention its low cost and facility in organizing (Warschauer, 2007, p.6, 7).

In their Case Study: Language Learning in Tandem, Sandra Truscott and John Morley (2003) stress the importance of authenticity of tasks, which tend to be highly motivating for students, as they provide opportunities to practice real communication. They also note the importance of quick and simple feedback to avoid interrupting fluency, thus favouring reformulations. In fact, with the screen-sharing

technology that is now available, a peer expert could simply highlight the word or phrase whenever the L2 student makes an error. This should then automatically trigger a reformulation on the part of the ESL learner.

3      PEER COLLABORATION

Another area of research in CMC has focused on peer collaboration; more specifically, on the corrective feedback, type of input, and negotiation for meaning that occurs during interaction.

**3.1    Peer Corrective Feedback**

Also known as Focus on Form Procedure, Long (2000, 1991, p.46) defined this technique as "…overtly draw[ing] students' attention to linguistic elements as they arise incidentally in lessons whose overriding focus is on meaning or communication". This means that, the native speaker, being the peer 'expert' in this case, would not act in the role of a teacher, but could simply draw attention to obvious errors by highlighting a word or phrase, and by using a comment box to ask for clarification. This should normally be followed by the 'repair' (or attempts to repair) or reformulation by the learner, with or without the help of the partner.

Frank Morris (2005), professor and researcher at the University of Miami, has conducted studies in the area of corrective feedback in interactional L2 contexts, particularly in combination with the use of CMC. In his study dealing with a U.S. fifth-grade, Spanish immersion class, pairs of students used a synchronous and text-based CMC tool called 'Blackboard' to complete jigsaw activities. The interactions were then coded for errors, corrective feedback and repairs. Although, the results showed high rates of both peer feedback given followed by learner repairs, the study does not deal with long-term effects. Indeed, further studies would need to include

pre- and post-tests, as well as a post-test after several weeks, for instance at mid-session and again at the end of the session.

## 3.2    The Interaction Hypothesis

The application of Long and Robinson's interaction hypothesis (1998) to online environments is the foundation of a branch of research that focuses on the impact of online interaction on second language acquisition. The hypothesis suggests that through the negotiation of meaning that occurs during interaction, the learner is naturally called upon to reflect upon grammatical form. Moreover, uptake and revision is encouraged by the need for clarification and understanding (Ware & O'Dowd 2008).

Interactionist researchers have focused on synchronous CMC and the type of input given.  One researcher found that language proficiency, computer skills and age played a role in the level of grammar improvement through L1 assistance (Lee, 2004). In 1997, Gass, like many others, demonstrated what many already supposed; that providing input clearly helps language acquisition. Frank Morris (2005) is one of the researchers who has dealt with the various types of feedback given, in other words, the form of input. Unlike Krashen (2002), Long, for example, in his 1996 version of the Interaction Hypothesis, argued in favor of negative input, both pre-emptive, like teaching grammar rules, and reactive, where the L2 learners compare their output with that of L1 output. Similarly, a long list of experts in the field of language acquisition have studied the various forms of negative feedback, also referred to as 'focus on form', (e.g., Leeman, 2000; Saxton, 1997), however, it is important to note that in all of these types, it is always the L1 who provides the correct form.

**3.3     Negotiation of Form and Revision Strategies**

Revision strategies, on the other hand, require the L2 to repair the error. In what is called, 'negotiation of form', Lyster (1998a) deals with the many ways that an L1 can help an L2 recognize and correct errors. This could lead to the ideal goal of revision strategies, where learners can recognize and correct their own errors. Moreover, in his study, Smith (2003) observed that ESL learners did in fact engage in negotiated interaction for meaning during task-based SCMC.

*3.3.1     Error Analysis (EA)*

Among the taxonomic second language EA publications, one of the best known is '*Common Errors in Gold Coast English*' by Brown and Scragg (1948). It is not the intention of this study to get into the details of the vast field of Error Analysis, nor the long tradition of collecting common errors, where entire volumes of errors have been listed and classified (Turton, 1995), especially since EA falls more under the category of methods for dealing with data than language acquisition. Having said that, it may however, be interesting to analyse errors to see if they tend to be more vocabulary-based or grammar/ syntax problems.

As Frank Morris, who is known for his expertise in this field of various types of feedback from peer experts, concludes in his article, 'Child-to-child interaction and corrective feedback in a computer-mediated L2 class (2005):

Much work needs to be conducted in order to examine how these new technologies and their applicability to language classrooms affect the learning context. Researchers and educators must continue to ask, for example, how technology improves the quality and process of L2 learning.

4       Synchronous Computer-Mediated Communication

As mentioned earlier, it is only in the past few years that studies have explored synchronous CMC as relates to SLA. Shannon Sauro, in her research synthesis (2011) found 97 such studies published in journals between 1990 and 2010. These analysed either the kind of language or "the effectiveness of SCMC for the development of a particular competence". According to Sauro, 48 studies looked at the development of various elements of grammatical competence; however it must be noted that some of these dealt with either oral or asynchronous CMC. Moreover, not all of them concerned learners of English. Clearly, more research is needed in this particular area.

One recent study of particular interest, was conducted in a business school in Copenhagen, more specifically, the department of International Business Communication (Mondahl & Razmerita, 2014). The study on Foreign Language Learning (FLL) in a business university context, involved 150 participants. This case study, which was firmly based on a social constructivism conceptual framework, focused on interaction and co-creation of knowledge. The Web 2.0 tools used included a social media collaborative platform as well as a customized educational version of Podio designed for foreign language learning, named StudyBook. The phenomenon investigated involved the challenges of teaching the new generation of digitally native students, who tend to be overly pragmatic and settle for surface learning in order to obtain a degree as quickly as possible. The problem, of course, is that surface learning lacks in long-term retention. These researchers hypothesized that "designing learning environments that lead to active participation, problem-solving, collaborative work – e.g. self-explanation to peers – may lead to more successful learning outcomes in the form of deep learning" (p.339). Convinced that today's learners are no longer simple passive receivers of knowledge, they examined the impact of using these active learning tools for students to accomplish tasks dealing with problem-solving cases that resembled real life situations. Although all of the

students followed the same course plan, one half used StudyBook platform, while, the other half used a 'non-social media enhanced environment'. In order to gather qualitative data, the researchers used questionnaires followed up by a focus group interview. The instruments used to collect the quantitative data included questionnaires, the case-based work of all 150 participants which consisted of finding solutions for realistic problems, as well as pre and post-tests in the form of compositions to demonstrate English business-related writing skills.

Their findings revealed that using these SCMC tools properly, were indeed "supportive and conducing to successful problem-solving which leads to successful adult foreign language learning". The questionnaire data showed that the use of the Web 2.0 platform for written interaction in a foreign language was more motivating than traditional group work. The challenge for educators, however, involved the conception of learning assignments that would lead students to interact synchronously online while collaborating and sharing knowledge throughout the process. Another challenge mentioned, which would need to be overcome, is the hesitation on the part of peers to correct fellow students. Finally, the researchers emphasized the relevance and importance of using learning logs, (where students can record corrected errors), in order to encourage metacognition. It should be noted that most of the questions addressed in this study were qualitative in nature, and unfortunately, the quantitative data in the form of test results, could not be accessed by the research team due to restrictions.

5.    CONCLUSION

With today's technology, text-based communication has attained a whole other dimension. Mark Warschauer expresses it well in his review of studies:

> The historical divide between speech and writing has been overcome
> with the interactional and reflective aspects of language merged in a
> single medium: CMC. For the first time in history, human interaction

now takes place in a text-based form – moreover a computer-mediated form that is easily transmitted, stored, archived, reevaluated, edited and rewritten (1997, p.472).

Clearly, given the emerging trends in text-based SCMC cutting-edge technology and having reviewed the literature dealing with the possibilities it offers for peer collaboration in Foreign Language Learning, more quantitative research needs to be done in order to assess learning outcomes of this viable solution.

Having taken into consideration what has and has not been done in this field, as seen in this literature review, as well as the socio-cognitive and constructivist concepts in the conceptual framework, the focus of this study was to quantitatively examine the effectiveness of using text-based SCMC and peer collaboration to improve ESL accuracy

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# CHAPTER FOUR
# THE QUANTITATIVE RESEARCH PLAN

1.   INTRODUCTION: TOPIC

Based on the theories mentioned in the Conceptual Framework, the appendices and the results of the studies mentioned in the Literature Review, the aim of this study was to examine whether doing written SCMC tasks with a native speaker, can be a solution for the problem of inaccuracy in ESL CEGEP students' language production. More specifically, the following three questions were investigated:

1.   Is using a SCMC[6] L1/L2[7] written interactive task method with peer expert intervention effective in increasing accuracy[8] in CEGEP ESL students' written production?

2.   Is using a SCMC L1/L2 written interactive task method with peer expert intervention more effective than an L2/L2 written interactive task method with non-expert peer intervention in increasing accuracy in CEGEP ESL students' written production?

3.   Is using a SCMC L1/L2 written interactive task method with peer expert intervention effective in increasing accuracy in CEGEP ESL students' written production after an interruption of 8 weeks?

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[6]SCMC: Synchronous Computer-Mediated Communication
[7]L1/L2: Mother-tongue speaker and second-language learner
[8]Accuracy: minimizing basic common errors (Appendix B)

2.   RESEARCH METHOD

## 2.1    Target Population and Sample

The target population for this innovation project was ESL CEGEP students, both male and female and normally between 17 and 21 years old. These students generally come from various regions of the province of Québec and occasionally from other countries, such as France and Latin America. However, students whose mother tongue is not French are rare. The participants for this research study were a non-probability, convenience sample composed of the 14 Intermediate / Advanced students enrolled in the Arts & Letters program and in my Fall-2015, second-year English Literature course at CEGEP Garneau, located in Québec city. In fact, some of these participants were at an intermediate level of English and had they not been accepted in the 'Immersion Profile', they would not have been in this advanced English course. Indeed, although this is a small sample size, what is interesting about having done research with this particular group, is that they had been accepted for the Immersion option of the Arts & Letters program, which means that they were in Europe while participating in this study. As a matter of fact, for 10 of the 16-week session, they were in Salamanca Spain, where exposure to much English was unlikely. Moreover, aside from the English Literature course used for this study, they did not have any course designed to improve their ESL skills, as CEGEP students normally have. This reduction of outside influence (noise) enabled the researcher to more closely pinpoint the source of any improvement in the participants' ESL production, in other words, it could be directly linked to the innovative SCMC peer-expert method.

The native speakers, (considered peer experts in this study), with whom the participants interacted on the subject of the tasks, were not considered to be participants since, any contributions they made were deleted prior to analysis and thus, not included in the data for the study. Aside from the Language Assistant

presently assigned to the Language Department at Cégep Garneau, these native speakers were found through various contacts, the Quebec VTT (Virtual Team Teaching) Group and on the following Language Exchange Web site: http://www.mylanguageexchange.com/Learn/ESL.asp In order to make this approach as viable and inviting as possible for educators, and also to be more realistic (time-wise), it was decided not to have any selection process or coaching procedure for the peer experts.

## 2.2 Instrumentation

Three instruments were developed by the researcher for the purpose of examining the following three questions: whether an innovative method of SCMC with a native English-speaking partner was effective in improving ESL accuracy, whether it is more effective than the standard method where students normally work with other L2 classmates, and finally if there was some measure of retention in any improvement made, in other words, testing a longer-term impact, (Frank Morris, 2005).

Firstly, a questionnaire, completed during a brief meeting prior to the beginning of the session, was designed to gather information on the participants' learning preferences, their previous exposure to English, their perspective on using ICT tools for language learning (Lee, 2004), and finally, if they generally had above average, average or below average grades in English (Appendix C).

Secondly, three tests were administered : a diagnostic / pre-test, which consisted of a Literary Analysis of a short story; a mid-test and a post-test, which also involved writing Literary Analyses of different short stories. The teacher used these as formatives for which she gave written feedback on the coded page. (See Appendix H for samples).

Thirdly, an innovative method was developed, using synchronous computer-mediated communication. The SCMC tool used for the interactive tasks was 'Google for Education' (Google Inc.), which offers a closed environment for students. The experimental method involved accomplishing authentic written communication tasks with random native English partners, through the use of screen-sharing technology, for approximately two 30-minute periods per week, for a total of 10 periods in 5 weeks (See Appendix G for instructions and Appendix H for samples). The partner was asked to point out errors through the use of highlighting and comment boxes, and help with editing, if necessary. The students using the standard method had the same tasks to accomplish, also using screen sharing technology, within the same time limits; however, their partners were their L2 classmates. As usual, they were asked to point out their partner's errors and make a joint effort at improving their language skills. As recommended by Danish researchers Mondahl & Razmerita (2014), the students were encouraged to record their errors in an Error Log. As with the tests, these tasks were also formative in nature and allowed the students to lay the groundwork in preparation for summative assignments. Although this is ethically advantageous for the participants in that being involved in this study did not demand any contribution of time, the researcher recognizes that the fact that these tests and tasks 'did not count' towards the course grade, could have an impact on the quality, namely the number of errors. In an attempt to compensate for this, these formative tasks were linked as much as possible to summative evaluations. It should also be noted that, unlike the tasks, the tests were done without access to any dictionary, grammar or spell-check tools.

Concerning the tallying of errors, the following elements are important to note. First of all, preliminaries such as greetings and salutations, (which were constantly reused), were removed. Thus, by dealing only with the body, compensation was made for the unequal number of words per chat.

Secondly, due to the 'chat' format, some leeway was allowed in punctuation and capitalisation. Only elements that were taught in their ESL classes, such as capitalisation of titles, days, months, subjects, places, etc., were counted as errors (see list in Appendix B). Moreover, if an error was clearly a typo, it was not counted. And finally, a repeated error was only counted once per task document.

As mentioned before, we were only dealing with basic easily recognizable errors (Appendix B). Given that the students were in a Literature course, the tasks generally involved literary-analysis-related discussions of selected short stories and poems (Appendix F and Appendix H). Discussion topics also included novels, movies and general culture, (the latter being included in the course objectives).

In brief, the experimental method thus consisted of using SCMC L1/L2 written- interactive tasks with peer expert intervention whereas the standard method consisted of using SCMC L2/L2 written interactive tasks with non-peer expert intervention. Considering that the L2/L2 documents contained data from 2 participants from the class, a maximum of 280 results were possible. In fact, 259 results were generated over 10 weeks.

To summarize, the instruments used in this study consisted of a questionnaire, three tests: a diagnostic / pre-test, a mid-test and a post-test, and finally, the instrument which yielded the bulk of the data consisted of documents of the screen-sharing collaborative tasks, using the 'Google for Education' synchronous screen-sharing tool.

## 2.3    Procedure and Design

The first step involved giving a detailed explanation of the study to the students, after which they received a consent form, which they signed if they agreed to participate in the study (Appendix E). The PERFORMA RL at CEGEP Garneau,

read aloud, explained and collected the consent forms. In order to best respect ethical considerations, these consent forms needed to be in French, the participants' native language. The participants then selected a perforated sheet containing the same code on both halves of the page as well as a place for them to write in their name. They retained one half and gave the other half to the PERFORMA RL, who kept this copy of codes and matching participants' names in her office. The participants used these codes to insure that students' names would never appear on the data collected. Finally, using their code, the students completed a short questionnaire providing information for independent variables used in the statistical analysis. Students were told that they did not need to answer the questions if they did not wish to participate, but that their form and survey sheet would be collected anyway. They were also assured that all of them would benefit from the same teaching method, regardless of whether or not they chose to participate, however only the data generated by consenting participants would be used for the research project. (See appendix D for more information on Ethical Considerations).

On Week 1 of the session, a diagnostic / pre-test was administered, which consisted of doing a Literary Analysis of a short story. Beginning on Week 2, two collaborative screen-sharing tasks were assigned each week until Week 6. This completed the documents for Set 1. On Week 7, a mid-test was done. Set 2 began on Week 9 and a post-test was given on Week 14. Both the mid and post-test involved writing Literary Analyses of different short stories. Throughout both sets of 5 weeks, about half of the participants were paired up with peer experts while the others were paired up amongst themselves. The documents containing the tasks were labelled using numbers 1 – 10 and added to the participant's letter and number code; for example, A1.1 – A1.10, A2.1 – A2.10 and B1.1 – B1.10, B2.1 – B2.10 etc. These codes were separated into 'Set 1', for the documents done from Weeks 2 – 6, and 'Set 2', for the documents done from Weeks 9 – 13.

*2.3.1  Causal Comparative Method: A Quasi-Experimental Design.*

Besides concealing the identity of the 14 participants, codes ranging from A1 – A7 and B1 – B7 automatically created 2 randomly-selected groups. To ensure equal treatment, the six students in Group A used the SCMC L2/L1 (native speaker partner) method for 5 weeks during the first half of the session, while the other 8 students (Group B), used the traditional L2/L2 method (classmate partner). During 5 weeks after mid-session, this was inversed. This counterbalanced design also acted as a control for differences between the two groups.

## 2.4    Data Analysis

The participants' screen sharing documents of the written interactive tasks, as well as pre-tests, mid-tests and post-tests were analyzed for the number of basic common errors (dependent variable) per number of words written, thus allowing for comparisons relative to the independent variables: the number of tasks completed, the number of words written in each document, feedback occurrences, the cumulative number of feedback occurrences, learning preferences, previous exposure to English, perspective on using ICT tools for language learning and average grades in English).

This collection of written data in the form of documents and tests (instruments) was content analysed (method) by counting the number of errors divided by the number of words the L2 student produced (hereon referred to as weighted number of errors). This transformed quantitative data were then comparable within groups of participants as well as between the 2 randomly-assigned groups.

This value was measurable on an equal interval scale and yielded data which made it possible to accurately identify if there was a decrease in the number of common errors the participants made, thus an improvement in accuracy

1a) before versus after both methods, (within group);

1b) throughout the use of the methods, (within group progression);

2) with SCMC L1/L2 method versus standard L2/L2 method (between groups method);

3) that was evident and measurable after an interruption of 8 weeks.

The interruption of the innovative method for 8 weeks between the end of Set 1 and the end of Set 2 for Group A, allows us to observe what happens over a longer term; whether the participants regress or retain any progress made while using the L1/L2 method.

### 2.4.1 Statistical Analysis

In order to answer the four aspects listed above that represent our three study questions, statistical analysis was done using Statistical Analysis Software 9.4, (SAS Institute, Cary, NC, USA). The data collected from the documents of screen-sharing tasks, as well as the data for t-tests (the pre, mid and post-test), were tested for their independence, for homoscedasticity, as well as for normality of distribution. Once all three of these elements were confirmed, parametric tests, which allowed for the robustness of the statistical outcome, were performed. The advantage of parametric tests allows for further comparisons of results like quantitative results. The t-test can be used even for small sample sizes as long as the variances are equal (de Winter 2013). Mixed linear models were used to detect a progression.

First, a two-sided Student's t-test was chosen to review pre-test results of the two groups, to see if differences between group A and B were statistically significant or not. A one-sided paired t-test was performed to statistically infer if differences between the pre and mid-test, the mid and post-test, and finally the pre and post-test, showed a significant progression within a given group (aspects 1a; 3). A one-sided

Student's t-test compared both methods by means of the errors made in the mid-tests of group A and B (aspect 2). Due to the small sample size (n<10) the homogeneity of variances had to be tested using the folded F-test (student t-test procedure SAS 9.4). The students' progression between tasks was defined by the number of errors in each document. This variable was measured within a particular group. Considering that each participant wrote numerous documents, the measurement unit was correlated. A mixed linear model was applied to explain the progression within the group (aspect 1b).

Since the students had answered a questionnaire on their learning preferences, their previous exposure to English, their perspective on using ICT tools for language learning, and if they generally have above average, average or below average grades in English, the binary values for those answers were also used to explain the variance of the observations. The model used had to explain the number of weighted errors as a function of a number of independent non-correlated variables (equation 1).

Equation 1

*weighted errors = f(number of tasks accomplished; feedback occurrences; pre-, mid-, post-test results; number of words in a document; number of tasks accomplished x independent variables; questionnaire variables)*

The mixed linear model applied takes into consideration the repeated measures where observations are not equally spaced in time. The sp (pow) covariance structure was chosen according to these measures. The repeated command assumed that the within-subject errors were independent. The correlation between the independent variables was given by the Pearson correlation factor (proc corr SAS 9.4). As for the numerical values, their logarithm, square root and squared value were calculated. The next step consisted of creating an interaction between each of these

variables and the number of tasks accomplished in order to measure progression. A significance threshold of alpha< 0.05 was applied on all statistical tests.

### 2.4.2  Graphical Display of Data

For this graphical display of data, both SAS and Microsoft Excel (2010) were used. A scatter plot was used to analyse the tendencies in the number of errors over the number of tasks completed. It was also useful for graphically separating groups and sets. Box plots show the dispersion of the errors for documents and for tests, as well as the tendencies. Results of mixed linear models graphically display the effects of dependent variables.

# CHAPTER FIVE
# PRESENTATION OF THE FINDINGS

1. DESCRIPTIVE STATISTICS

Aside from the information obtained from the questionnaire (independent variables), the data gathered for this study consisted of the weighted number of errors in the three tests, as well as the ones in the screen-sharing task documents (dependent variable). Other independent variables included the number of tasks accomplished, the average number of words written per task, and the occurrences of peer intervention (feedback).

The average weighted number of errors in the pre-test ranged between 0.06 ± 0.039 and 0.071±0.062 for group A and B respectively (Table 1).

Table 1
Statistics for the weighted number of errors (mean, st. dev., 25-, 50%-, 75% quantile) and independent variables in the tests and task documents

|  | Group A | | | | | Group B | | | | |
|  | pre-test | mid-test | post-test | tasks Set 1 | Set 2 | pre-test | mid-test | post-test | tasks Set 1 | Set 2 |
|---|---|---|---|---|---|---|---|---|---|---|
| Nb | 5 | 6 | 6 | 51 | 56 | 8 | 8 | 8 | 76 | 76 |
| Average | 0.061 | 0.034 | 0.021 | 0.023 | 0.019 | 0.071 | 0.050 | 0.036 | 0.024 | 0.019 |
| St. dev. | 0.039 | 0.039 | 0.016 | 0.017 | 0.016 | 0.062 | 0.029 | 0.018 | 0.017 | 0.011 |
| Q (75%) | 0.090 | 0.076 | 0.028 | 0.030 | 0.029 | 0.065 | 0.062 | 0.053 | 0.034 | 0.025 |
| Q (50%) | 0.070 | 0.019 | 0.019 | 0.020 | 0.012 | 0.060 | 0.046 | 0.027 | 0.020 | 0.017 |
| Q (25%) | 0.020 | 0.000 | 0.007 | 0.010 | 0.008 | 0.035 | 0.033 | 0.023 | 0.013 | 0.010 |
| range | 0.080 | 0.087 | 0.044 | 0.094 | 0.062 | 0.190 | 0.096 | 0.045 | 0.079 | 0.055 |
| - xposEng | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 3 | 3 | 3 |
| + xposEng | 4 | 5 | 5 | 5 | 5 | 8 | 8 | 8 | 8 | 8 |
| Learnprf_w | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Learnprf_o | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 |

| | | | | | |
|---|---|---|---|---|---|
| **fB total nb** | | 44 | 31 | 34 | 126 |
| **fB average** | | 0.863 | 0.554 | 0.447 | 1.658 |
| **fBstdev** | | 1.415 | 1.127 | 0.900 | 2.324 |

**Note:**nb: number of observations; Q: quantile; xposEng: - little, + more exposure to English; learnprf_w: learning preferences written: _o oral; fB: feedback

After 5 weeks, mid-test results allowed for a comparison between Group A (L1/L2) and Group B (L2/L2). At that stage, Group A had diminished their average weighted number of errors by almost half (0.034±0.039) and Group B had a decrease that was somewhat less noticeable (0.05±0.029). At the end of the study, the post-test made it possible to compare the effect for Group A after an eight-week interruption, as well as to verify if the L1/L2 method used by both groups had a similar outcome. The post-test showed an improvement for both groups. While Group A had reduced their average weighted number of errors by a third of the pre-test result (0.021±0.016), group B had halved it (0.036±0.018). The screen-sharing documents, on the other hand, reflected the continuous aspect of the method applied in this study, for which no progress is evident. It should be noted that the tendencies observed in this table can only be confirmed in connection with the standard deviation, as seen in the statistical analyses (2 Statistical Results).

## 1.1    Dispersion over the duration of the study
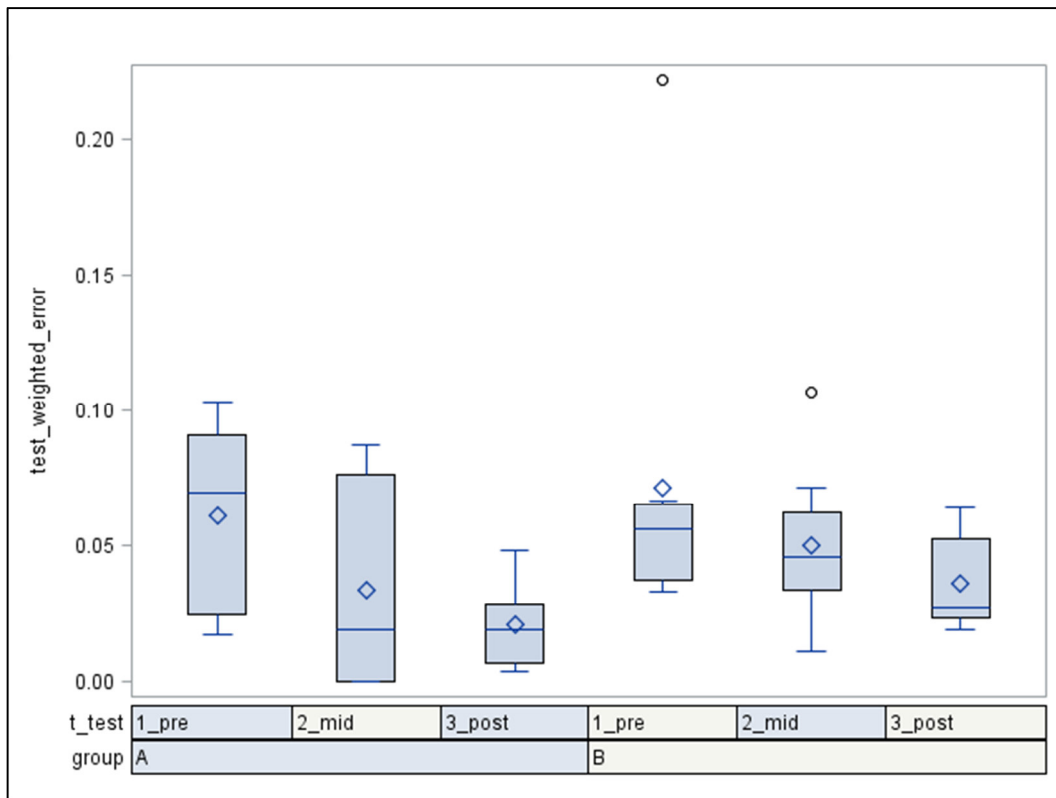


Figure 1  1_pre-test, 2_mid-test, 3_post-test boxplots showing the distribution of weighted number of errors in Group A and B (Diamond: average Circle: outliers)

The boxplots above show how the average and the dispersion of both groups evolved for each of the tests (Figure 1). For both groups a slight decrease in the average weighted number of errors (blue diamond) can be observed from the pre to the post-test. We also see an obvious decrease of dispersion in the post-test for Group A, while in Group B we see more equality throughout the tests. In the pre and mid-test of Group B, two outliers could be detected; however, neither of these was related to a compilation error, thus kept in the data pool for ongoing statistical analyses.

As for the task documents, the average weighted number of errors per group and set (Figure 2: blue diamonds) appears to diminish slightly within each group from Set 1 to Set 2.
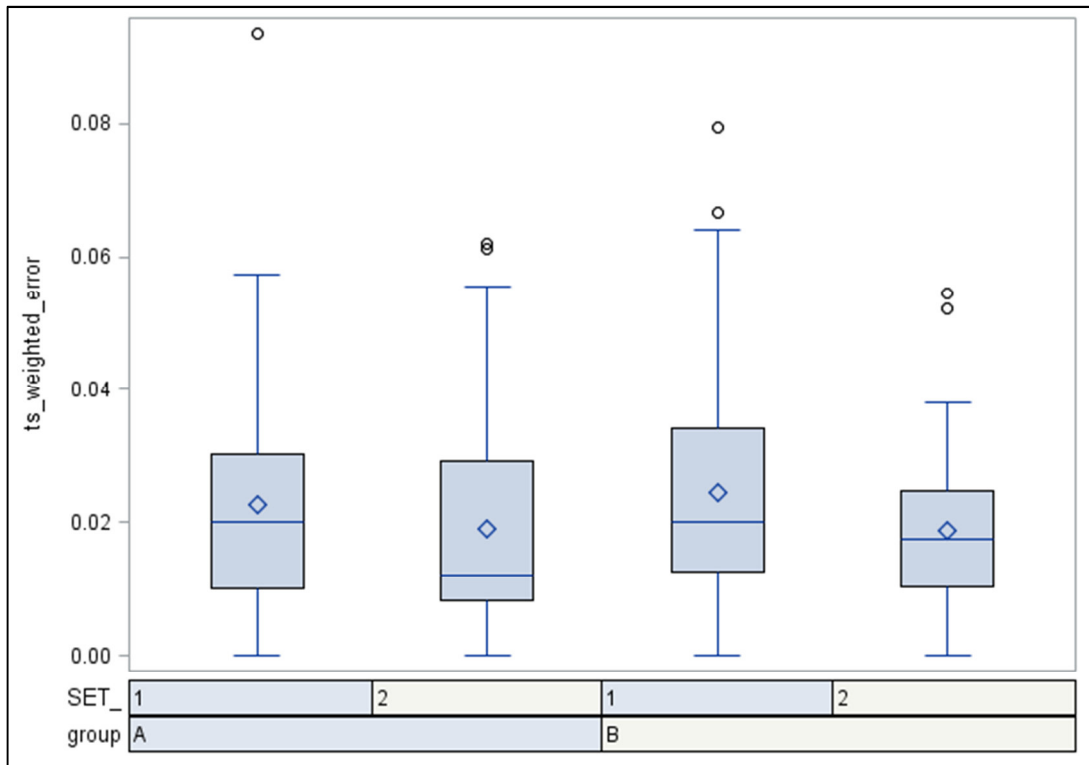
Figure 2  Weighted number of error distribution in task documents for Group A and B in Set 1 and 2

Here the dispersion of weighted errors in Group A is similar in Set 1 and 2, while it clearly decreases for Group B once the L1/L2 method is applied (Figure 2).

Figure 3 shows that the number of errors identified in the task documents seem to have a highly variable dispersion over the duration of the study. Thus no tendencies can be observed from the boxplots for Group A, which is consistent with the observations from Figure 2.
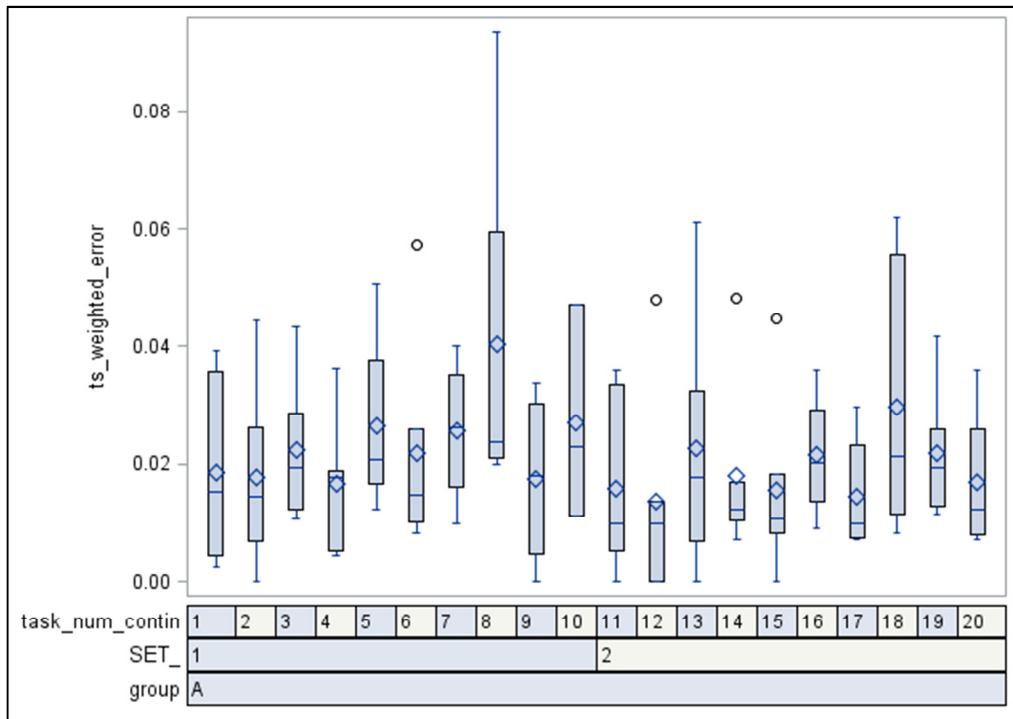
Figure 3  Overview of the dispersion for Group A tasks for Set 1 & 2
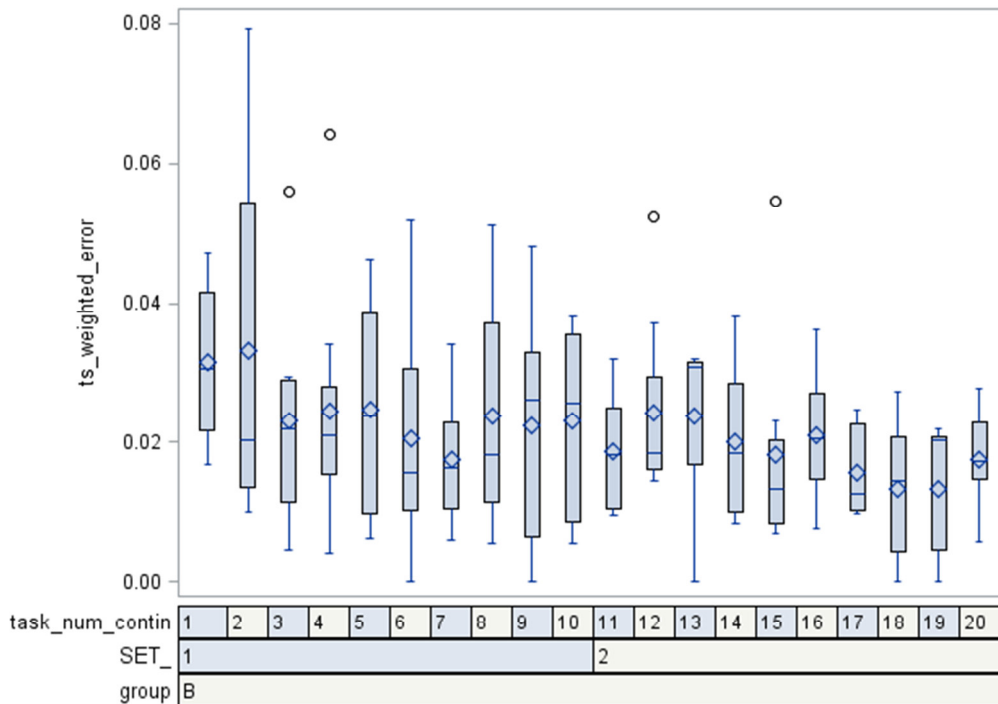


Figure 4  Overview of the dispersion for Group B tasks for Set 1 & 2

Contrary to Group A, Group B shows a slight decrease in its average number of weighted errors, as well as in the dispersion over the duration of the study, thus representing a slight improvement in accuracy (Figure 4). We observe a link between Figure 2 and Figure 4; that of the average improvement as well the decreasing dispersion.

2.  STATISTICAL RESULTS

**2.1  Control Procedure**

The first test that was applied, clarified that apart from equal variances (p=0.379), Group A and Group B were not statistically different from one another (p=0.628). As Group A and B started out equal, any improvement could be attributed to the use of the innovative method (Table 2).

Table 2
Similarities in the pre-test results of both Groups A and B confirmed by a 2-sided t-test preceded by a folded F-test

| Group | Method | Mean | 95% CL Mean | | Std Dev | 95% CL Std Dev | |
|---|---|---|---|---|---|---|---|
| A | | 0.061 | 0.013 | 0.109 | 0.039 | 0.023 | 0.112 |
| B | | 0.072 | 0.019 | 0.124 | 0.062 | 0.041 | 0.127 |
| Diff (1-2) | Pooled | -0.010 | -0.066 | Infty | 0.055 | 0.039 | 0.093 |

| Method | Variances | DF | t Value | Pr > t |
|---|---|---|---|---|
| Pooled | Equal | 11 | -0.34 | 0.628 |

| | Equality of Variances | | | |
|---|---|---|---|---|
| Method | Num DF | Den DF | F Value | Pr > F |
| Folded F | 7 | 4 | 2.57 | 0.379 |

**Note:** CL Mean: confidence limit of the mean; DF: degrees of freedom; Den DF: DF in the denominator; Num DF: DF in the numerator

## 2.2    Research Question 1

**Is using a SCMC L1/L2 written interactive task method with peer expert intervention effective in increasing accuracy in CEGEP ESL students' written production?**

Two types of statistical tests were conducted to deal with the first research question concerning an increase in accuracy in CEGEP ESL student written production while using the SCMC L1/L2 approach.

First, using a one-sided paired t-test, a comparison was made between the pre-tests and the mid-tests of group A (p=0.114), as well as the mid-test and post-test of Group B (p=0.172). Neither shows any significant difference between the methods.
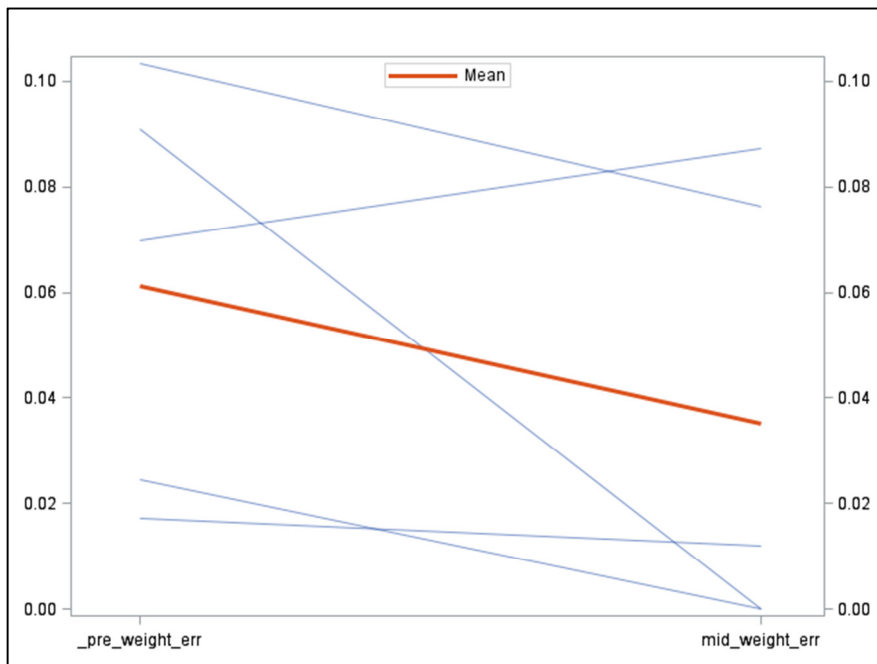


Figure 5  Group average (red line) and individual observations of weighted number of errors in Group A pre and mid-tests before and after L1/L2 method

Even though a slight negative slope in the average weighted number of errors could be observed in both, the spread of data was so large that no statistical

improvement could be detected in the test results for either of those groups (Figure 5 and Figure 6).
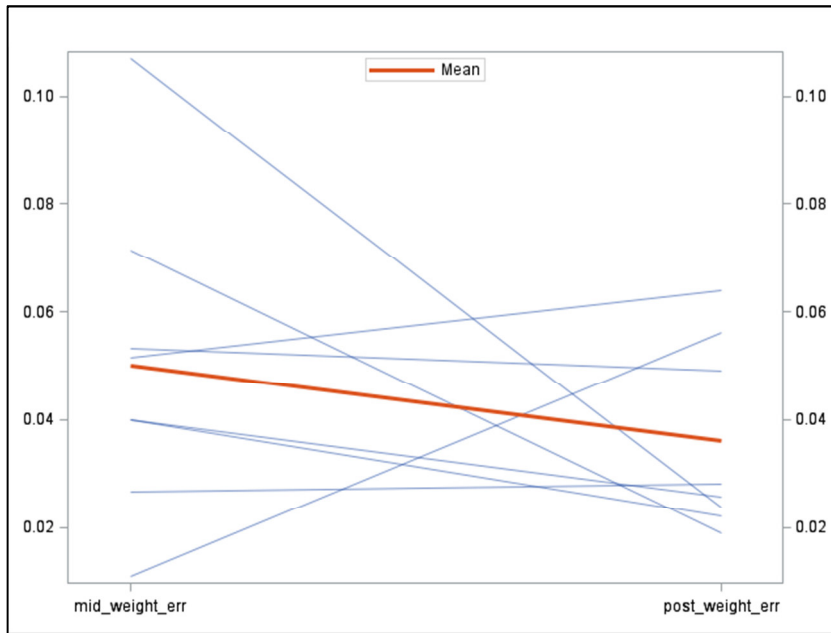


Figure 6  Group average (red line) and individual observations of weighted number of errors in Group B mid-tests and post-tests before and after L1/L2 method

Secondly, for the other instrument used, that of the screen-sharing tasks, a mixed-linear model compares the number of weighted errors in each document, from the beginning to the end of the L1/L2 method, (both for Group A in Set 1 and Group B in Set 2), with independent variables, that of the binary variables of the questionnaire and the amount of feedback. The latter was transformed into a logarithmic variable (log_cumL1), as well as its squared value (sq_L1) (Table 3; 4 & Figure 7; 8). As we can see, other than the number of tasks done, two other independent variables came into play; previous exposure to English (-xposEng) and the number of peer interventions made, in other words, the amount of feedback received from the peer during the tasks (#ts x log_cumL1). The level of previous exposure to English clearly has a major impact on accuracy, (**-**xposEng:0.02061; p= 0.0114 in Table 3 and Figure 7).

Table 3
Group A tasks: interaction between the number of tasks and feedback, as well as previous exposure to English

| Effect | Estimate | Standard Error | DF | t Value | Pr > |t| |
|---|---|---|---|---|---|
| Intercept | 0.01943 | 0.00229 | 4 | 8.49 | 0.0011 |
| #ts x log_cumL1 | 0.00007 | 0.00002 | 46 | 3.38 | 0.0015 |
| -xposEng | 0.02061 | 0.00465 | 4 | 4.43 | 0.0114 |

**Solution for Fixed Effects**
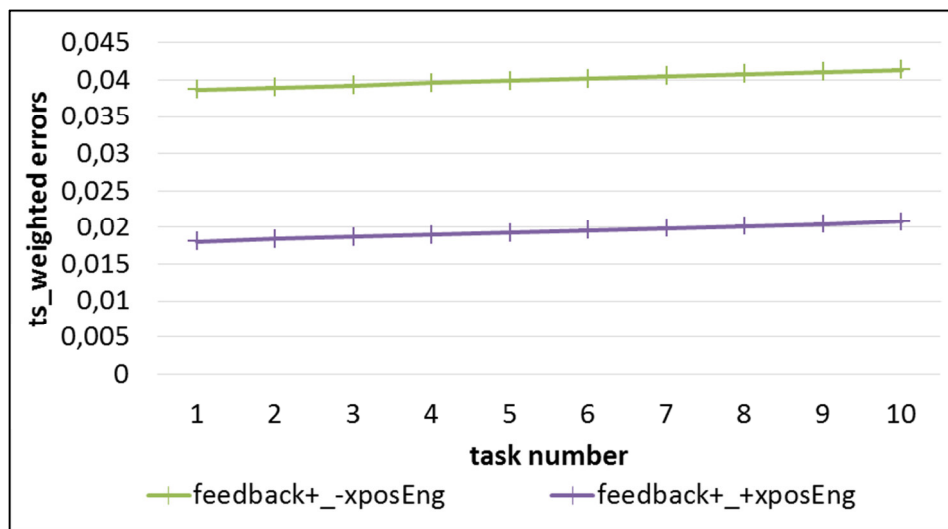


Figure 7  Group A L1/L2 method: weighted number of errors as a function of exposure to English and the number of tasks, interacting with the number of interventions

Here the low interaction estimate (#ts x log_cumL1: 0.00007) between number of tasks accomplished and the cumulative amount of feedback received (number of interventions by the L1) explains why only a slight effect is seen, even though it is highly significant (p= 0.0015). In fact, it shows no obvious slope in the progression (Table 3; figure 7).

The results for Group B however, suggest that the number of tasks accomplished using the L1/L2 method does indeed have a positive influence (task-

num: -0.00102) at a significance level of p= 0.033 (Table 4). For this group, previous exposure to English plays a lesser role (-xposEng:0,00683).

Table 4
Group B tasks: interaction between the number of tasks and feedback, as well as previous exposure to English

| | Solution for FixedEffects | | | | |
|---|---|---|---|---|---|
| Effect | Estimate | Standard Error | DF | t Value | Pr > |t| |
| Intercept | 0.01982 | 0.002887 | 6 | 6.87 | 0.001 |
| #ts x sq_L1 | 0.00001 | 4.31E-06 | 64 | 2.88 | 0.005 |
| -xposEng | 0.00683 | 0.002734 | 6 | 2.50 | 0.046 |
| task_num | -0.00102 | 0.000469 | 64 | -2.18 | 0.033 |

The progression of Group B during the L1/L2 method is shown in Figure 8. As with Group A, the interaction, as seen here, only has a minimal effect. Apart from the progression represented by the negative slope (**task_num**-0.00102; p = 0.033), previous exposure to English, as a binary variable, also has an impact on the result, although it is less noticeable than in Group A (**-**xposEng: 0,00683; p = 0.046). This equals an average of about half of an error per hundred words for Group B versus two errors per hundred words for Group A.

Therefore, according to these models developed for the screen-sharing tasks, there was no improvement for Group A, even when considering other variables, such as feedback (interventions), and previous exposure to English. However, for Group B, the 'task_num estimate' of -0.00102 shows a significant improvement, indicating that using a SCMC L1/L2 written interactive task method with peer expert intervention can be effective (Figure 8).
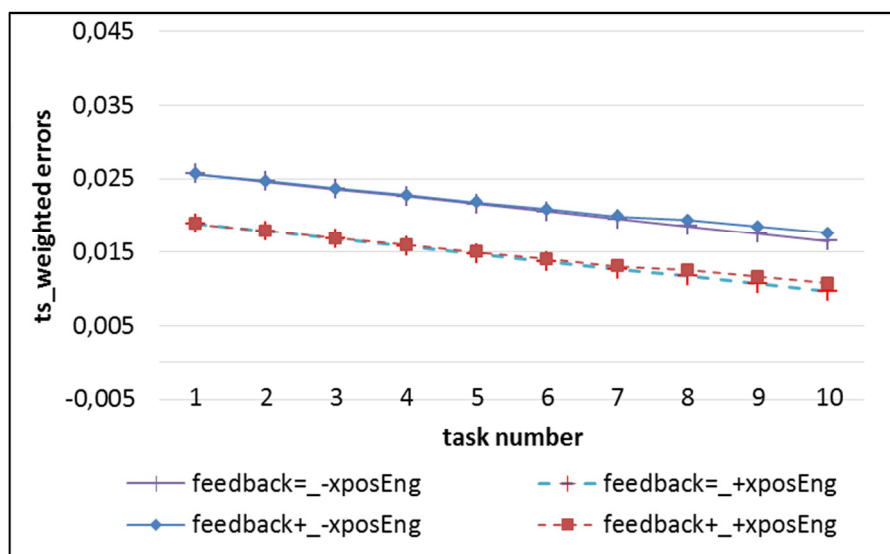
Figure 8  Group B L1/L2 method: weighted number of errors as a function of exposure to English and the number of tasks, interacting with the number of interventions

## 2.3    Research Question 2

**Is using a SCMC L1/L2 written interactive task method with peer expert intervention more effective than an L2/L2 written interactive task method with non-expert peer intervention in increasing accuracy in CEGEP ESL students' written production?**

In order to address our second research question, one-sided t-tests were conducted to compare the mid and post-test results of Group A with those of Group B (Tables 5 and 6).

Table 5
Mid-test comparison of both Groups A and B with a one-sided t-test between L1/L2 and L2/L2 intervention on Group A and B respectively

| Group | Method | Mean | 95% CL Mean | | Std Dev | 95% CL Std Dev | |
|---|---|---|---|---|---|---|---|
| A | | 0.034 | -0.007 | 0.074 | 0.039 | 0.024 | 0.095 |
| B | | 0.036 | 0.021 | 0.051 | 0.018 | 0.012 | 0.036 |
| Diff (1-2) | Pooled | -0.003 | -0.030 | Infty | 0.028 | 0.020 | 0.047 |

| Method | Variances | DF | t Value | Pr > t |
|---|---|---|---|---|
| **Pooled** | Equal | 12 | -0.17 | 0.5642 |

| | **Equality of Variances** | | | |
|---|---|---|---|---|
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 5 | 7 | 4.85 | 0.0619 |

The comparison of the mid-tests does not show any difference between Group A and Group B (p=0.56), thus, no significant impact of the new method can be seen from the tests. This is the same result as was obtained from the comparison of the post-tests (p = 0.937) (Table 6).

Table 6
Post-test comparison of both Groups A and B with a one-sided t-test between L1/L2 and L2/L2 intervention on Group A and B respectively

| Group | Method | Mean | 95% CL Mean | | Std Dev | 95% CL Std Dev | |
|---|---|---|---|---|---|---|---|
| **A** | | 0.021 | 0.004 | 0.038 | 0.016 | 0.010 | 0.040 |
| **B** | | 0.036 | 0.021 | 0.051 | 0.018 | 0.012 | 0.036 |
| **Diff (1-2)** | **Pooled** | -0.015 | -0.032 | Infty | 0.017 | 0.012 | 0.028 |

| Method | Variances | DF | t Value | Pr > t |
|---|---|---|---|---|
| Pooled | Equal | 12 | -1.64 | 0.9368 |

| | **Equality of Variances** | | | |
|---|---|---|---|---|
| **Method** | **Num DF** | **Den DF** | **F Value** | **Pr > F** |
| **Folded F** | 7 | 5 | 1.16 | 0.8998 |

On the other hand, when comparisons of the task document results are made with the control groups, we note that Group B improved in Set 2 while using SCMC with a peer expert but made no improvement in Set 1 when they were paired up with a classmate.

## 2.4    Research Question 3

**Is using a SCMC L1/L2 written interactive task method with peer expert intervention effective in increasing accuracy in CEGEP ESL students' written production after an interruption of 8 weeks?**

The longer term impact of this innovative SCMC method as described in the third research question was measured with Group A data, since it was the only group to experience an interruption in its use of the innovative method. This interruption was made possible since Group A used the new method for the first half of the session and then went back to the usual L2/L2 method for the second half of the session. A one-sided paired t-test was chosen to measure if the effect of the method was evident after an interruption of 8 weeks (Table 7).

Table 7
One-sided paired t-test between the pre-test and the post-test of Group A

| Mean | 95% CL Mean | | Std Dev | 95% CL Std Dev | |
|---|---|---|---|---|---|
| 0.041 | 0.010 | Infty | 0.032 | 0.019 | 0.092 |

| DF | t Value | Pr > t |
|---|---|---|
| 4 | 2.84 | 0.0234 |

Upon comparing the pre-test with the post-test we see that the students significantly improved in accuracy (p>0.023).

# CHAPTER SIX
# DISCUSSION AND CONCLUSION

### 1   SUMMARY OF FINDINGS

The focus of this study was to quantitatively examine the effectiveness of using text-based SCMC with peer collaboration, to improve ESL accuracy. An innovative method based on a socio-cognitive and constructivist, or cognitive-interactionist approach, was examined via written tests, a questionnaire and screen-sharing task documents.

## 1.1   Descriptive Statistics

Although it appears that the two randomly assigned groups of participants began at a similar level of accuracy according to the pre-tests, we can observe a much greater spread of the core within Group A (Table 1), compared to that of Group B, which is much more homogenous. Throughout the test results, Group B showed a certain level of constancy, while Group A only improved in the post-test results. This is reflected in the average results as well as in the dispersion. Considering that two levels of English were represented among the participants, it is possible that those who began at a weaker level improved more than the others. In order to fully understand the discrepancy in dispersion between Group A and Group B, another element needs to be addressed, that of the sample size. Indeed, a small sample size lends to an attribution of too much weight to each individual participant. This, for example, was the case for the questionnaire item that came forth as having an impact on the results. However, only one Group A participant fell in the category of 'less than moderate previous exposure to English'. Hence, although the result appears to be logical, it can result in a precipitated inference.

As for the task documents completed in both Sets 1 and 2, we observe the opposite effect in the distribution of weighted number of errors, in that, it is Group B that became gradually more homogeneous rather than Group A (Table 1, and Figures 2 and 4). This difference can be explained by the significant discrepancy between the number of interventions made by the peer experts (p=0.0182), considering that Group B received twice as much feedback (1.66 ± 2.3) from native speakers as Group A did (0.86 ± 1.4) (Table 8).

Table 8
Average occurrence of L1 feedback for Group A versus Group B

| Group | N | Mean | Std Dev | Std Err | Minimum | Maximum |
|---|---|---|---|---|---|---|
| A | 51 | 0.863 | 1.415 | 0.198 | 0 | 7 |
| B | 76 | 1.658 | 2.324 | 0.267 | 0 | 10 |
| Diff (1-2) | | -0.795 | 2.010 | 0.364 | | |

**One-sided t-test for unequal variances**

| Method | Variances | DF | t Value | Pr > |t| |
|---|---|---|---|---|
| Satterthwaite | Unequal | 123.98 | -2.39 | 0.0182 |

**Equality of Variances**

| Method | Num DF | Den DF | F Value | Pr > F |
|---|---|---|---|---|
| Folded F | 75 | 50 | 2.7 | 0.0003 |

In fact, one of the challenges in using this L1/L2 interactive method is that of finding peer experts who place importance on accuracy. This is a crucial issue in this case, because we are depending on them to set the example and to help undo bad habits, not reinforce them by ignoring errors committed by the learner. One option would be to train the peer experts. Vinagre and Muñoz (2011) explored the impact of peer feedback on the development of learner accuracy through an email exchange between post-secondary learners of Spanish and German. They place the responsibility of enabling students to give adequate corrective feedback on the teachers.

However, as mentioned earlier, it is not realistic (time-wise) for an educator with several groups of 30 – 40 students to screen all of the peer experts or take time to coach them. It is for this reason that not much time or effort was dedicated to the selection of native speakers in the present study. Moreover, aside from being given very basic instructions (Appendix G), they were not coached. As a result, we note a certain period of adaptation on the part of the peer experts. These confounding variables, however, became an issue and certainly had an effect on the Group A task and test results, as Set 1 was a sort of a trial run where they were discovering and adjusting to a new method and technological tool. This is equally true of the learners as well.

## 1.2    Statistical Results

Three instruments were developed for the purpose of evaluating the effectiveness of this SCMC innovative method, namely the three tests, the task documents and the questionnaire. The tests allowed for a punctual and independent verification of the impact, both of the innovative method, as well as that of the control groups, whereas, the tasks provided a progressive view of the participant's evolution. Among the questionnaire items, only 'previous exposure to English' was brought out as a binary variable in the statistical models. Obviously, those who considered that their previous exposure to English had been less than moderate had a lower level of accuracy in their writing. Thus, the use of the questionnaire reduced the random effects of the model, yielding a more accurate prediction, as reflected in a smaller Akaike information criterion (AIC) (Littell et al. 2006).

Not surprisingly, considering that the two groups came from the same population sample, the pre-test confirmed that they were statistically similar. This control procedure proved that, despite the two different levels of English represented among these participants, they were equally distributed from a statistical standpoint. We can therefore conclude, that differences detected in the future tests were

statistically related to the impact of the applied method rather than any initial difference between groups.

### 1.2.1    Question 1- effectiveness of the innovative method

Firstly, comparing the pre and mid-test for Group A (L1/L2) and the mid and post-test for Group B (L1/L2) yielded no clear conclusions concerning the effectiveness of the innovative method. This could be explained by the large spread and a small sample size, which made it difficult for the paired t-test to detect differences, due to its robustness.

Secondly, using the task documents to compare the L1/L2 progress of both groups, only Group B showed improvement as they increased in number of tasks accomplished. This no doubt was linked to the small amount of feedback that Group A received by their peer experts, as mentioned above (Table 8). Kabata and Edasawa (2011) revealed the importance of feedback in their study examining language learning patterns in response to feedback from keypals. Their findings highlight the effective role of 'noticed' input for grammar learning. To sum up, feedback clearly plays a major role in improving accuracy.

### 1.2.2    Question 2- innovative versus traditional

Again, the fact that Group A had so little L1 feedback may have affected the statistical results when comparing the **mid-tests** for Group A (L1/L2) and Group B (L2/L2), in an attempt to see if the former was more effective that the latter. By overlooking errors, the native speakers essentially played a similar role to that of classmates, who may simply not recognize errors. Thus, not surprisingly, the level of accuracy in the mid-tests proved to be similar for both groups.

A comparison of the **post-tests** for Group A (L2/L2) and Group B (L1/L2), showed no significant difference either. It should be noted that Group A, used here as a control group was somewhat 'tainted' by the fact that they had benefited from the new method in Set 1. This effect can be seen by observing the quality of feedback (number of interventions in relation to number of errors), that this group gave upon reverting to the traditional method. This will be discussed later (Table 12).

Based on the **task documents**, we saw no impact on the weighted number of errors committed by Group A in Set 1. However, when comparisons of the task document results were made with the control groups, we noted that Group B improved in accuracy in Set 2 while using SCMC with a peer expert, whereas they had made no improvement in Set 1 (the model did not converge) when they were paired up with a classmate. Thus, it can be presumed that in this case, the peer expert intervention was effective, which is consistent with the large amount of feedback seen in Table 8. Again, it appears that feedback plays a major role in improving accuracy, which is consistent with the findings of Kabata and Edasawa (2011).

Mondahl & Razmerita (2014) conducted a similar study, in which they examined the impact of using a collaborative platform tool for active Foreign Language Learning (FLL), with the intention of finding a solution for the problem of surface learning. Although most of their questions were qualitative in nature, they used similar instruments such as questionnaires, the work of the participants, as well as pre and post-tests in the form of compositions to demonstrate English writing skills.

Their questionnaire data showed that the use of the Web 2.0 platform for written interaction in a foreign language was more motivating than traditional group work. This was also apparent in the tasks done by the participants in the present study, as shown by a substantial increase in the average number of words they wrote when paired up with a native English speaker (Table 9: 257 vs 203: p ‹ 0.0001).

Table 9

Two-sided t-test comparing the average number of words written
per L2/L2 task document versus L1/L2 task document

| Peerx | Method | Mean | 95% CL Mean | | Std Dev | 95% CL Std Dev | |
|---|---|---|---|---|---|---|---|
| 0 | | 202.5 | 188.7 | 216.3 | 80.01 | 71.38 | 91.03 |
| 1 | | 257 | 236.5 | 277.6 | 117.2 | 104.4 | 133.7 |
| Diff (1-2) | Satterthw aite | -54.5 | -79.2 | -29.862 | | | |

| Method | Variances | DF | t Value | Pr > |t| |
|---|---|---|---|---|
| Satterth waite | Unequal | 221.47 | -4.36 | <.0001 |

| | | Equality of Variances | | |
|---|---|---|---|---|
| Method | Num DF | Den DF | F Value | Pr > F |
| Folded F | 126 | 131 | 2.15 | <.0001 |

The value of writing more words is reflected in Group B, where we observe
that the greater the number of words the students wrote, the more they improved in
accuracy (Table 10 & Figure 9).

Table 10

Fixed effects explaining the average number of weighted errors in the task documents
for Group B in Sets 1 and 2

| | | Solution for Fixed Effects | | | |
|---|---|---|---|---|---|
| Effect | Estimate | Standard Error | DF | t Value | Pr > |t| |
| Intercept | 0.02872 | 0.003163 | 7 | 9.08 | <.0001 |
| sqrt_numL1L2 | 0.0056988 | 0.001363 | 142 | 4.17 | <.0001 |
| #ts x numword | -0.00023 | 0.000065 | 142 | -3.48 | 0.0007 |
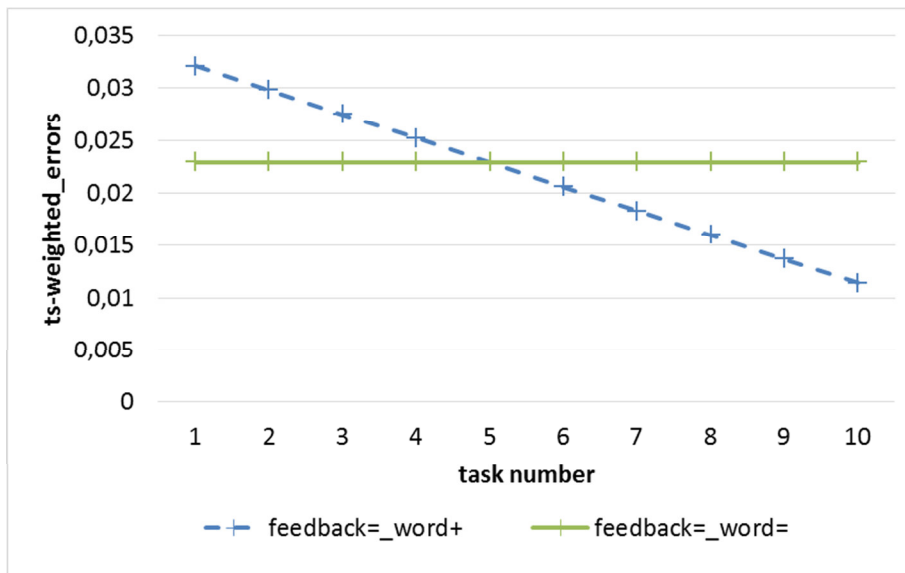
Figure 9  Impact of the number of words written interacting with the number of tasks done on Group B Set 1 (L2/L2) and Set 2 (L1/L2)

According to this model an increase in the number of words written interacting with the number of tasks done, yields a positive impact on accuracy (dashed line).

In the mixed models, the amount of feedback as independent variable came out several times. Although the feedback interacting variable had a predictive value, it always reflected a negative impact on the improvement of accuracy, which is shown by the positive estimates. As the feedback occurs after the error it cannot act as a predictor. Therefore, it does not explain the evolution of a learning process but only an instant relation between the quality of a task and the feedback linked to that task. In other words, error free tasks will not get any feedback whereas tasks peppered with mistakes have a greater probability of receiving some feedback.

Not only did students write more with peer experts, but it was observed from the task documents that the L1/L2 discussions tended to be of a more serious and in-depth nature with a more formal level of language than the L2/L2 discussions (Appendix H). Aside from the problem of using overly casual language when paired

up with a classmate, the fact that their partner shared their mother tongue made it easy to fall into the habit of slipping in some French words (Appendix H). Fiori (2005) found similar results in her study which paired classmates in SCMC assignments. Spanish learners, who were not given assignments that deliberately focused on correct grammar, also resorted to their mother tongue as well as social behaviour that lacked seriousness.

In their article, Mondahl & Razmerita (2014) mention the hesitation on the part of peers to correct fellow students due to ownership issues, lack of security in their level of competence, or simply out of apathy. We have similar findings; not only did classmates rarely point out errors and seemed uncomfortable doing so, (excusing themselves), but they misidentified errors or made errors in their corrections. We even see comments where the students write that they will ask the teacher their questions; however this never occurred (Appendix H). In fact, compared with the peer experts, classmates made less than half as many interventions (Table 11).

Table 11
One-sided t-test showing the number of peer expert feedback occurrences compared to feedback occurrences among classmates

| Peerx | N | Mean | Std Dev | Std Err | Minimum | Maximum |
|---|---|---|---|---|---|---|
| 0 | 132 | 0.492 | 1 | 0.087 | 0 | 5 |
| 1 | 127 | 1.339 | 2.040 | 0.181 | 0 | 10 |
| Diff (1-2) | | -0.846 | 1.597 | 0.198 | | |

| Method | Variances | DF | t Value | Pr > |t| |
|---|---|---|---|---|
| Satterthwaite | Unequal | 181.65 | -4.21 | <.0001 |

**Equality of Variances**

| Method | Num DF | Den DF | F Value | Pr > F |
|---|---|---|---|---|
| Folded F | 126 | 131 | 4.16 | <.0001 |

This problematic aspect, does allow us to see the importance of the peer expert. While it was not the intent of this study to qualitatively examine the content of the task documents, it is interesting to see evidence of ESL learners improving their

language (vocabulary, expressions and grammar), simply by imitating the native speakers, even though the learner's errors were never pointed out (Appendix H).

Table 12

Feedback quality (fB_q) for Group A and B in each set estimated by the average accuracy (amount of fB/number of errors per task) (in %)

| Method | Group A | | Group B | |
|---|---|---|---|---|
| | fB_q | Stdev | fB_q | Stdev |
| L1/L2 | 23.2% | ± 34% | 28.0% | ± 38% |
| L2/L2 | 18.4% | ± 32% | 11.5% | ± 23% |

Table 12 gives us an idea of the relation between the number of errors made by the students and the number of interventions made by native speakers as well as by classmates. Thus, feedback quality is given by the proportion of feedback over the number of errors observed. Several findings can be extracted from the figures in this table.

Firstly, we noted earlier that in Set 2, Group A reveals evidence of practice and training in giving feedback as the number of interventions are higher than those of Group B in Set 1 (Table 12). Interestingly, we can see that, compared to Group B in Set 1 (L2/L2), these students provide more input when working with a classmate after having first worked with a native speaker. Two explanations are possible; either they were influenced by the example of the peer experts who intervened when they collaborated on the tasks, or the fact that their basic common errors were pointed out in Set 1, better enabled them to detect these errors in a classmate's writing.

Secondly, a certain 'quality' can be observed among peer experts, which is absent among classmates. With peer experts, as the weighted number of errors in a given task increases, so does the number of feedback occurrences. With classmates, however, regardless of the number of errors, the average amount of feedback remains the same. L1 feedback for Group A reaches an average of 23% while Group B tops at 28%. L2 feedback shows an 11% quality index for Group B while Group A is at 18%.

These results support the findings of Bower and Kawaguchi (2011), who focussed on the rates of error correction in text-based SCMC, both for English and Japanese, and also found them to be extremely low. As a matter of fact, only 0.8% of English errors were corrected in their study (p. 54). Although Bower and Kawaguchi (2011) who used a similar SCMC tool for their study, argue in favour of synchronous text chat in that it provides more time for noticing, processing, planning and producing language than oral interaction, they point out that ACMC, however, offers these same advantages. Their findings revealed that using an asynchronous email follow-up exchange, 61.9% of the errors in English were corrected. This large increase is not surprising considering that students were required to look for errors in a separate individual assignment. According to Vinagre (2005), even in using ACMC such as an email exchange, errors which do not interfere with communication are overlooked. Moreover, ACMC cannot offer the 'feel' of a live conversation. Furthermore, this raises an interesting question. Do these figures translate into an improvement in accuracy or is it possible that more learning occurs when the errors are pointed out spontaneously and the learner can immediately correct him/herself, versus assuming that after some lapse of time, the learner will go back and look over errors made in a previous exchange, when the need for being understood and getting their message across is no longer the driving motivation? As Bower and Kawaguchi (2011) state, "while nearly devoid of corrective feedback, students' synchronous text chat logs reveal high levels of negotiation of meaning". Likewise, Lyster (1998a) deals with the many ways that an L1 can help an L2 recognize and correct errors.

### 1.2.3    Question 3- longer-term effects

In order to examine the somewhat longer term effects of the innovated method, we compared pre and post-tests for Group A. Recall that this group had reverted to a traditional L2/L2 method after the initial five weeks of using the innovative method, therefore representing an eight-week interruption of its use. The

findings showed a significant improvement between the initial and final level of accuracy for this group. As noted earlier, previous studies have shown the effectiveness of using CMC. Mondahl & Razmerita (2014) concluded that using SCMC tools properly, were indeed "supportive and conducing to successful problem-solving which leads to successful adult foreign language learning". In Vinagre's (2005) tandem learning email exchange program study, "77% of the students perceived a clear improvement of their level of proficiency in the target language".

## 2. CONCLUDING REMARKS

Socio-constructivists such as Dillenbourg et al. (1997), Doise (1990) and Paiva (1998) have pointed out the important role that interaction with peers plays in the learning process. This Vygotskian theory has been supported by the present study, as well as several other studies (Bransford, Brown, and Cocking, 2000). Appel, and Mullen (2000), highlighted the pedagogical value of tandem learning in that it provides opportunities for active communication with native speakers. Other researchers have emphasized the importance of following up language instruction with opportunities for both authentic input and intake in a contextualized manner (Curtain & Dahlberg, 2004; Omaggio, Hadley, 2001). Smith (2003, p.2), for example, dealt with advantages of text-based SCMC, such as, time to reflect on form and even reformulate without interrupting the flow of conversation. Having incorporated the above mentioned factors in the innovative method developed for this project, it naturally offered the participants opportunities for peer interaction and authentic input and intake in context. Indeed, it proved to be a motivating and effective way to engage learners in active interaction and have contact with peers of other countries and cultures.

Finally, general findings of this study yielded the following responses to the three questions posed in this study. Overall, the findings of this study reveal that peer interaction with L1 feedback, in a text-based synchronous electronic environment,

generates opportunities for CEGEP ESL learners to improve their writing accuracy. Moreover, the findings illustrate that collaborative SCMC tasks with native speakers are more likely to help improve ESL accuracy amongst CEGEP students, than tasks done with classmates. Lastly, the evolution of the average performance in the tests as well as in the tasks, indicate that prolonged use of this method would yield better results.

## 2.1    Strengths and Limitations of the Study and Recommendations

Unlike the numerous qualitative studies done in this area, the focus of this study was to quantitatively examine the effectiveness of using text-based SCMC with peer collaboration to improve ESL accuracy. Interestingly, one of the strengths of this study was the fact that our data included all of the screen-sharing task documents. These allowed for certain qualitative observations as well (Appendix H), permitting us to gain a more in-depth perspective of the role of the peer. Firstly, we see examples of improvement reflected within the same task document, where the peer expert did not point out an error but the learner picked up on the example set by the native speaker. This could certainly spur ideas for future research, in order to discover if occurrences of this type of learning are significant (Lyster, 1998a).

Furthermore, it may be of interest to examine the contents of these documents in order to gain an appreciation for just how much it can take to overcome bad habits or undo fossilized errors (Appendix H), an issue which could also be worth exploring.

Lastly, it is important to mention some of what can be observed in the L2/L2 interactions, considering that this has been the scenario that is favoured since the latest Educational Reform in Quebec and that is still commonly used in CEGEP ESL courses as well. As mentioned earlier, classmates rarely pointed out errors, or sometimes even misidentified them. They also easily slipped into the use of French

words or sentence structure, and they used a much less formal level of language. Moreover, they generally wrote less. Finally, even the most well-intentioned students, who meant to ask the teacher their questions later, never actually got around to it. Based on the observations made in this study, it appears that the method commonly used – that of working with a classmate (or classmates), may in fact, reinforce bad habits rather than increase accuracy.

Two other strengths of this study can be noted. The first concerns the subject matter for the collaborative tasks. Unlike Mondahl and Razmerita (2014), coming up with ideas for the content of the tasks posed no problem. Literary analysis and cultural discussions proved to be an ideal theme for interesting discussions.

Secondly, according to researchers Lin, Huang, & Liou (2013), the lack of detailed descriptions of SCMC tasks in articles makes it difficult to accurately measure the effectiveness of SCMC on SLA. Following their advice, weekly (in fact bi-weekly) assignments were done in pairs for this study, and appendices B, F, G and H provide very detailed descriptions and examples of the tasks that were done.

Naturally, this study also had its limitations. One factor that may have influenced the outcome was the time limitation of the 15-week session, which meant that only rather short-term effects could be observed. Ideally, participants would need to use the innovative method over a longer period of time to properly assess its effectiveness. In fact, only a prolonged use of the innovative method yielded a significant positive impact. Since improvement in accuracy occurs in proportion to the number of synchronous text-based screen-sharing tasks done with L1 feedback, it can be presumed that had the students used the method for more than only 5 weeks, their progress would have been greater. As Frank Morris (2005), a leading researcher in CMC technology stresses, there is a need for more research dealing with these fairly recent tools in order to examine their long-term effects on the learning of a second language.

Another major limitation of this study, which could also explain some inconsistencies in the results, was the small sample size. Although small groups are advantageous for language learners, it is not ideal for doing research. Not only did it affect the results, but it also limited the possibilities of the study. For instance, elements such as gender, age, mother tongue or knowledge of another language, could have been interesting variables to look into, however, the survey questions did not include these in order to eliminate the possibility of retracing the identity of the participants. It should be noted, however, that despite the small number of observations (de Winter, 2013), it was possible to statistically analyse the data, since the high t-values in the t-tests, as well as the distribution patterns of the observations, allowed us to maintain statistical power.

To sum up, in spite of limitations, both the tests, as well as task documents, showed an average improvement with the use of this peer-collaborative text-based SCMC method. Although positive tendencies could be seen throughout the average values for both the tests and the tasks, these were undermined by the high level of dispersion, especially due to the small sample size and the limited time frame. Due to the low number of observations, statistical inference is not recommended until additional studies with larger samples have validated these tendencies.

Although, the findings revealed positive outcomes, using this innovative method does not automatically result in an improvement in written ESL accuracy. There are many factors and variables at play, such as the peer experts involved and the manner in which corrected errors are handled. In fact, error logs are highly recommended. Additionally, it was noted that separate error logs often go unnoticed if they are not accessible enough. Ideally, the list would need to be on the same document and always transferred to new documents, in order to encourage the recycling (reuse) of these elements. Based on their results, Vinagre and Muñoz (2011) emphasize the importance of use of remediation which leads to more recycling of errors in later language production, in other words, reusing the correct form. In

their study (Appendix A), they include the recycling of previously corrected errors in the instructions. Mondahl & Razmerita (2014) also emphasized the relevance and importance of using learning logs, (where students can record corrected errors), in order to encourage metacognition. Although this seems ideal for overcoming fossilized errors and improving language proficiency, it is of course, dependent on first having peer experts who correct errors. Thus, it is suggested that future application of this type of innovative method using SCMC with peer experts would include some teacher input and monitoring, and a more structured approach for dealing with errors. As Vinagre and Muñoz (2011) stress, the learning logs need to include reflection questions and awareness-raising comments in order to be effective. Some coaching of both learners and peer experts may also be worth the effort. This key problem should be further addressed in studies that focus particularly on the native speakers.

Clearly, the matter of not paying attention to errors, both on the part of the peer expert and the learner, is a key problem that needs to be addressed. In their study, Bower and Kawaguchi (2011) found an almost total absence of explicit corrective feedback during text-based SCMC. The fact is; times have changed. We no longer live in the days when people conscientiously wrote letters by hand, paying attention to every detail, knowing that the person or people who would read it, would likewise pay attention to detail. Welcome to the age of digitalisation! This is the generation that simply scrolls down to the bottom and clicks on 'I agree'. Being constantly bombarded by masses of information naturally leads to a lack of attention to detail, yet this is what we require in our CEGEP ESL classes.

However, as Kabata & Edasawa (2012) put it:

Obviously, not all feedback is noticed, and not all *noticed* gaps lead to learning, since language learning takes place over a long time. However, communication projects like ours are very important because they

provide opportunities for learners to receive ample peer feedback and authentic input, and to thus not only raise language awareness but also serve as a motivation for language learning.

As with the development of other skills, individual coaching would be ideal. With text-based SCMC, educators no longer need to spread themselves so thinly amongst large groups of students in order to focus on language accuracy since expert guidance and models are literally at their fingertips. Indeed, today's ICT tools allow our Generation C CEGEP language students to go beyond the classroom walls and benefit from the real world of languages and cultures.

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**APPENDICES**

**APPENDIX A:  BLOOM'S TAXONOMY OF LEARNING**
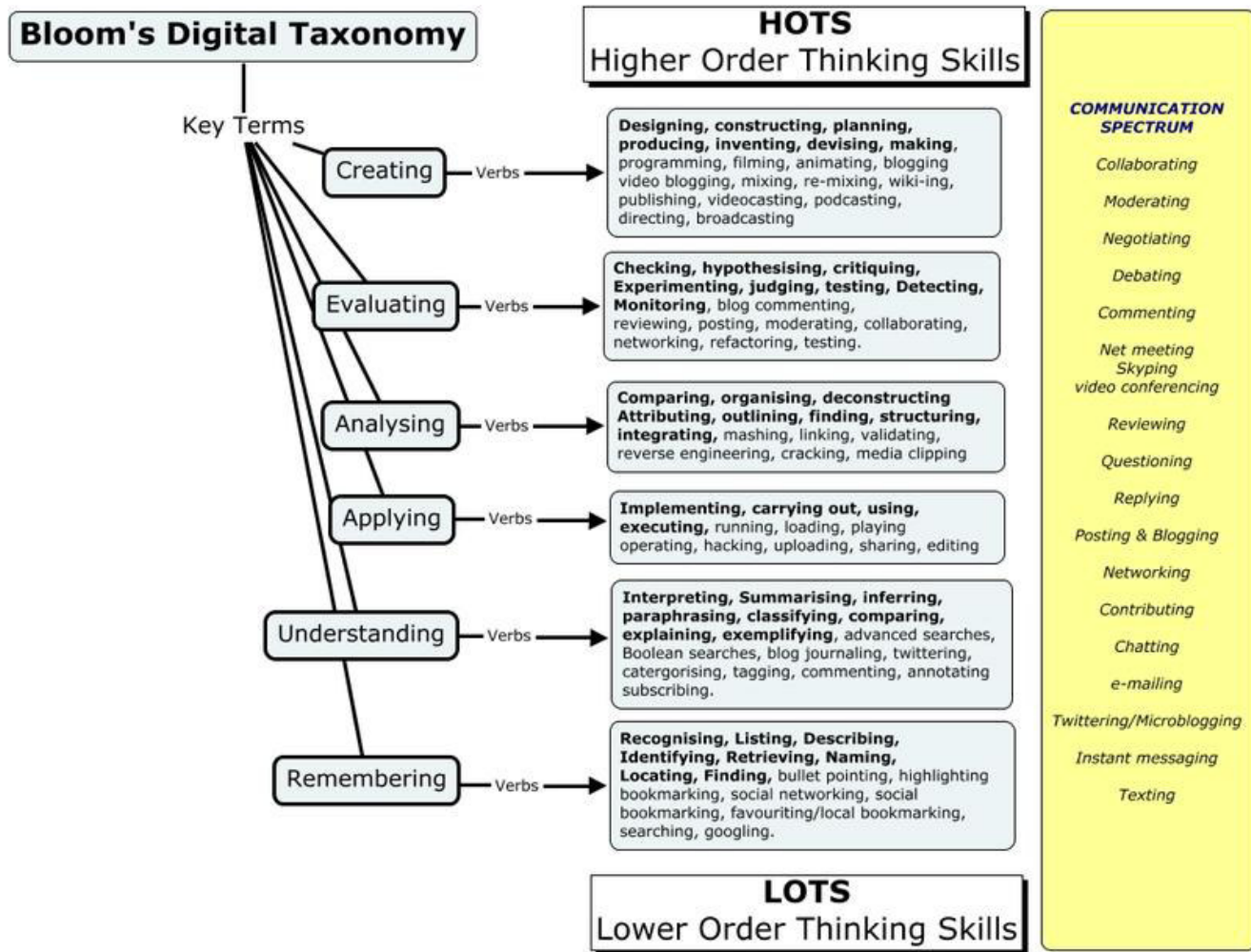


*Drawing by A Churches created using C-Map Tools*

(Churches, A. 2009, p. 6)

## APPENDIX B : BASIC ESL GRAMMAR NOTIONS

The following is a comprehensive list of the '**Basic Grammar Notions**' commonly covered in Québec ESL courses. Errors reflecting a lack of integration of these elementary English language notions are considered unacceptable and students are thus penalized for making such errors in their evaluations.

**Verb tenses** and aspects in the **affirmative**, **negative** and **interrogative** forms:
- ✓ simple present
- ✓ present continuous / progressive
- ✓ simple past
- ✓ present continuous / progressive
- ✓ future (will and be going to)
- ✓ present perfect

Information **questions**
"Yes-No" questions
Question words
Short answers and complete sentences

Basic **modal auxiliaries**

**Nouns and Non-count Nouns**

**Pronouns:**
- ✓ subject
- ✓ object
- ✓ demonstrative
- ✓ possessive
- ✓ relative

**Adjectives:**
- ✓ demonstrative
- ✓ descriptive
- ✓ possessive
- ✓ comparative
- ✓ superlative
- ✓ equality

**Adverbs**
- ✓ formation
- ✓ position
- ✓ comparative
- ✓ superlative
- ✓ equality
- ✓

Time expressions, adverbs of frequency

**Determiners**
- ✓ quantifiers
- ✓ articles

**Prepositions**
- ✓ place
- ✓ time

**There + be** (present, past and future)
**Simple and compound sentences**
**Basic syntax**
**Punctuation and Capitalization**

**APPENDIX C : QUESTIONNAIRE**

**CODE: _____**

**QUESTIONNAIRE**

1) Concerning your **preference of communication skills**, would you say that you learn best while:
    o   Listening and speaking (oral)
    o   Reading and writing (visual)

2) If you take into consideration the following elements: the quality of English instruction you have had in school, immersions (summer camp, trips to English-speaking areas, etc.), perhaps an English-speaking relative, neighbour or friend etc. , would you say that your **previous exposure to English** was:
    o   moderate to high
    o   less than moderate

3) Would you say that the **use of Information and Communication Technology** (ICTs) **in language learning**, generally has:
    o   more of a  negative effect
    o   more of a  positive effect

4) Are your grades in English generally:
    o   below the class average
    o   equal to or above the class average

**APPENDIX D : ETHICS FORM**

UNIVERSITÉ DE
**SHERBROOKE**

**Faculty of Education**

**Form for the ethical evaluation of projects**

1. **PROJECT COORDINATOR(S)**

Student(s): Joanne Gaultier

Telephone number: 418 688-8310 #3890 (work)     581 700-8608 (home)

Email: jgaultier@cegepgarneau.ca

**Study program:** PERFORMA / MTP (MEC)

Pedagogical activity: MEC-802

Project director: **Tim Dougherty**

Registration semester of activity: Winter 2015

2. **PROJECT DESCRIPTION**

Project title:

**IMPROVING CEGEP STUDENTS' ESL ACCURACY THROUGH**

**L1/L2 SYNCHRONOUS TEXT-BASED SCREEN-SHARING TASKS**

**Project funding:**

None ☒        Source:

**Is it an inter-college project?**

Yes ☐          No ☒

If yes, other colleges involved:

**Date for beginning of data collection:** August 2015

**Project summary**

CEGEPs are now reaping the 'first fruits' of the last Educational Reform. On the one hand, ESL teachers are noticing an improvement in fluency and a seemingly lower level of inhibition when it comes to production skills. However, this output is clearly accompanied by a greater lack of accuracy. Colleagues agree that we are continuously correcting the same basic recurring errors. Keeping in mind that the purpose of language is communication, I am interested in finding a way to improve CEGEP student ESL accuracy, while maintaining a natural and motivating learning environment. Recent advances in synchronous computer-mediated communication can provide the necessary tools to meet this challenge. In my study, I will explore the possible advantages of using these user-friendly screen-sharing tools. Since they provide easy access to native speakers throughout the world, learners will be able to receive individualized feedback from these peer experts. Documents of peer-collaborative tasks will be analysed for possible improvement in accuracy over a fifteen-week period.

## 3. ETHICAL ASPECTS
Balance between risks and benefits

What are the risks for participants?

There will be minimal risks (if any) to the participants.

How much time is required for participation?

There is no time required for participation in the study, considering that the tasks done are necessary preparation for meeting the course requirements. As for the 3 tests, the first will be used as an anonymous diagnostic test and the other two, as formative evaluations, where general anonymous feedback will be given in class by the teacher.

What are the benefits for participants? The participants will have an opportunity to improve their ESL accuracy, while having contact with another culture and acquiring their course objectives.

Is there any monetary or other compensation for project participation such as for time spent or travel, etc.?

Yes ☐          No ☒


If yes, justify, and specify the form of compensation:


Is the project located below the threshold of minimal risk?  Yes.
*Minimal risk: When the probability of occurrence and the level of possible risk or drawbacks are comparable to those in the daily life of the participants.*


If there is a possibility of risk involved for participants what measures will you take to mitigate these risks?  N/A

Free and informed consent

Was the research **consensual** in nature? Yes.

*Was consent of participating individuals requested? Were they aware that they were involved in a trial project in the context of a master's degree in college teaching (MEC) and aware of the type of project?*

Yes ☒          No ☐

*If not, apply to the committee about the possibility of carrying out a non-consensual project.*


What are the **measures taken to ensure the free and informed consent of all participants?**

Concretely, how will project participants be recruited? Will a consent form be signed?

The participants are the 14 students enrolled in my '*Textes et Contextes' (604-3P3-FX)* course, offered by Cégep Garneau for the Fall-2015 session.

The native speakers, (considered peer experts in this study), with whom the participants will accomplish their tasks, (in this case, literature reviews of various short stories), are not considered to be participants since, any contribution they make will not be collected as data for the study, as it will be deleted prior to analysis. For this reason, and in order to avoid any bias on the part of these assistants, they will not be informed about the specific purpose of the research. Aside from interacting with the learner on the subject of the task, the peer-expert will be asked by the participant to signal obvious language errors. These native speakers will be found through various contacts and on the following Web site, which was founded by Helene Cormier, a language teacher and Dan Yuen, a student who attended Ms. Cormier's Language Exchange workshop in Montreal. http://www.mylanguageexchange.com/Learn/ESL.asp

This online community, launched in October, 2000, now has over one million members. It is compare to old very high-security. For instance, no email address or any other form of contact information can be given on the site, as this violates the terms of the Membership Agreement, for which you can be banned from the community.

Other possibilities include: ePals or eTandems, as well as:

http://www.scrabbin.com/people/?practicing=2

https://www.eusa.ed.ac.uk/getinvolved/eusaglobal/languages/tandem/


**Who** will be handing out and collecting the consent forms?

Marie-Chantal Dumas, the PERFORMA RL at CEGEP Garneau, will hand out, read aloud, explain and collect the consent forms. I will answer any questions. In order to best respect ethical considerations, these consent forms are in French, the participants' native language.

Does the project involve **minors and/or legally incompetent individuals?**

Yes ☒          No ☐

If yes, specify the precautions taken in this regard: Parental consent is required by law for the participation of minors.

Note: I was recently informed that parental consent was no longer required.


Confidentiality of data

What measures will be taken to ensure **the confidential nature and anonymity of data?**

After signing their consent form, the participants will select a perforated sheet containing the same code on both halves of the page. Each half also contains a place for them to write in their name. They will retain one half and give the other half to Marie-Chantal Dumas, the PERFORMA RL at CEGEP Garneau. She will keep this copy of codes and matching participants' names in her office, along with the consent forms.

Participants will use these codes so that their names will not appear on the 3 tests or any documents.

**Where** will the data be stored? Will they be stored under lock and key? Will electronic files be password protected?

Aside from the questionnaires, which will be kept in the RL's office until after the session is over, and the 3 coded tests, which the researcher (teacher) will have in her possession, all documents will be in electronic format in Google DOCs. Cégep Garneau has chosen to adopt the use of 'Google for Education'. Created as a reaction to earlier privacy issues, this closed environment assures protection of privacy and property rights. As with Moodle, the college will handle the creation of student accounts, which will then be deleted shortly after the session is over. In this case, codes will be used rather than the students' names. The accounts are password protected and only accessible to each individual participant. As researcher, I will keep my copy of the documents in my password-protected 'Google for Education' account for 2 years, after which I will delete all participant documents.

**Who** will have access to the data?

As researcher, I will have copies of the electronic documents but not access to the participants' accounts. The participants will also share their screens / documents with the peer experts (assistants).

**When** will the raw data be destroyed (paper questionnaires, cassettes of interviews, etc.)?

As per regulations at Cégep Garneau, I will destroy any paper copies of tests within 2 years after finishing my project.

**How** will results be **disseminated**?

The compiled results will be disseminated in my Master's paper, which will be stored at the University of Sherbrooke library. They will surely be shared with colleagues, possibly in

educational workshops or conferences. They may be printed in Educational Journals or other publications.

*Instructions for completing this form: This form is accompanied by an introductory document. If you have questions, please communicate with Performa@Usherbrooke.ca.*

*Form adapted by the Comité d'éthique de la recherche – Éducation et sciences sociales Formulaire d'évaluation éthique des mémoires et thèses.*www.usherbrooke.ca/gestion-recherche/.../**ethique/**CER-ESS_demande.doc

**APPENDIX E : CONSENT FORM**



**FORMULAIRE D'INFORMATION ET DE CONSENTEMENT**

Vous êtes invité(e) à participer à un projet de recherche. Le présent document vous renseigne sur les modalités de cette étude. S'il y a des mots ou des paragraphes que vous ne comprenez pas, n'hésitez pas à poser des questions. Pour participer à ce projet de recherche, vous devrez signer le présent consentement. Nous vous demandons de signer et dater les deux copies afin que vous puissiez en conserver une pour vos archives personnelles.

**Personne responsable du projet :**
**Joanne Gaultier**
418 688-8310  #3890
jgaultier@cegepgarneau.ca

**Directeur de mémoire :**
**Tim Dougherty**
450 672-7360  #283
tdougherty@champlaincollege.qc.ca

**Répondante locale PERFORMA :**
**Marie-Chantal Dumas**
418-688-8310 • p.2202 • Bureau D-2523
mcdumas@cegepgarneau.ca

**TITRE DU PROJET:**

Améliorer la qualité de l'ALS au CEGEP par l'utilisation de la CMOet de la collaboration

synchrone entre pairs

**ALS:** Anglais langue seconde
**CMO:** communication médiée par ordinateur (communication virtuelle, cyber communication)

**OBJECTIF GÉNÉRAL DU PROJET :** analyser l'efficacité de l'utilisation de la CMO synchrone  dans l'apprentissage de l'anglais langue seconde.

**OBJECTIFS SPÉCIFIQUES DU PROJET :** analyser l'efficacité de l'utilisation des outils de partage d'écran afin de profiter de la collaboration avec des pairs dont la langue maternelleest l'anglais, pour accomplir des tâches authentiques.Ce projet est réalisé dans le cadre d'une maîtrise en enseignement au collégial (MEC).

**Raison et nature de la participation**

Vous avez été sélectionnés en tant que participant(e) pour cette étude parce que l'utilisation de la CMO, une modalité pédagogique innovante, s'intègrent parfaitement dans le cadre du cours *'Textes et Contextes' (604-3P3-FX),* offert au Cégep Garneau à l'automne 2015. Selon le plan de cours, « les compétences associées à ce cours concernent la recherche, l'analyse et la critique littéraire ou culturelle ainsi que l'utilisation des technologies de traitement de l'information (TIC) ».

Votre participation sera requise durant la session entière. Cependant, étant donné que les tâches que vous allez réaliser font intégralement partie de la planification de l'enseignement, **votre participation ne requière aucun temps supplémentaire de votre part**; autre que celui initialement prévu pour tout étudiant qui suivrait ce cours (pondération : 2-1-3).

Plus particulièrement, votre participation consistera à faire des devoirs conçus pour faciliter les présentations en classes et la réalisation des analyses littéraires et culturelles. Ces analyses représenteront la majorité des évaluations sommatives pour ce cours. De plus, la participation à cette étude comprend également la réalisation de trois tests formatifs. **Tous les travaux et tests prévus au cours (et qui seront utilisé pour l'étude) permettront aux participants d'être mieux préparé pour les évaluations sommatives.**

Les activités d'apprentissage et d'évaluation formative (travaux et tests) que vous réaliserez bâtiront le corpus de données qui seront, à la fin de la session, analysées dans le cadre de ce projet de maîtrise. Aucune évaluation sommative ne fait partie des données assignées à l'étude. Finalement, vous aurez à répondre aujourd'hui même, à un petit questionnaire.

**Avantages pouvant découler de la participation**

Votre participation à ce projet de recherche vous apportera l'avantage de bénéficier d'un moyen pédagogique innovateur afin de faciliter votre apprentissage et améliorer votre maîtrise de l'anglais.

De plus, les activités à réaliser vous permettront d'enrichir vos connaissances interculturelles, votre appréciation de la culture et de la littérature anglaise. Vous aurez aussi l'occasion d'améliorer vos habiletés reliées aux technologies de l'information et de communication (TIC). Ces derniers éléments sont directement en lien avec les compétences du cours que vous suivrez.

En terminant, votre participation contribuera à l'avancement des connaissances entourant l'enseignement des langues étrangères et une meilleure compréhension, à cet égard, du potentiel des TIC.

**Inconvénients et risques pouvant découler de la participation**

Étant donné qu'aucun temps ni effort supplémentaire seront exigés et que les données ne pourront être évaluées, votre participation à la recherche ne devrait pas comporter d'inconvénients.

**Droit de retrait sans préjudice de la participation**

Il est entendu que votre participation à ce projet de recherche est tout à fait volontaire et que vous restez libre, à tout moment, de mettre fin à votre participation sans avoir à motiver votre décision ni à subir de préjudice de quelque nature que ce soit.

**Il est important de comprendre que le désistement à l'étude ne vous relève pas de votre responsabilité de compléter toutes les activités d'apprentissage et évaluation prévues au plan de cours.**

Si au cours de cette étude vous souhaitez vous désister, vous n'aurez qu'à faire parvenir un courriel à Marie-Chantal Dumas : [mcdumas@cegepgarneau.ca](mailto:mcdumas@cegepgarneau.ca) signalant clairement votre intention de vous retirer de l'étude en précisant comment les données accumulées jusqu'au désistement doivent être traitées. Deux options sont offertes :
- les données accumulées jusqu'à date peuvent être utilisées aux fins de cette étude;
- les données accumulées jusqu'à date doivent être retirées de l'étude.

Rappelons qu'un abandon de cours n'entraîne pas automatiquement un retrait des données.

**Confidentialité, partage, surveillance et publications**

Récemment, Google a mis à la disposition des instituts d'éducation *«Google for Education »*. Cet outilfourni un espace sur la toile qui assure la confidentialité des données reliées à l'identité personnelle des utilisateurs et à leurs contenus.

Avant le début de la session d'automne 2015, le cégep aura créé un compte lié à votre code. Votre nom ne sera pas associé à ce compte. Afin de protéger votre identité, vous devez vous assurer de ne jamais utiliser votre nom. De plus, l'accès au compte sera protégé par un mot de passe. Ce compte sera détruit à la fin de la session.

Vous êtes la seule personne qui peut gérer vos documents. Dans le but de fournir les données nécessaires à cette étude, vous devrez partager les documents avec la personne responsable de cette étude (Joanne Gaultier) et également à votre partenaire.

Durant votre participation à ce projet de recherche, la responsable de cette étude recueillera dans un dossier de recherche, les données nécessaires au projet de recherche. Celles-ci comprendront les informations suivantes : les documents partagés, les 3 évaluations formatifs et les questionnaires.

Toutes les données recueillies au cours du projet de recherche demeureront strictement confidentielles dans les limites prévues par la loi. Afin de protéger votre identité et de préserver la confidentialité de ces données, vous ne serez identifié(e) que par un code. La clé du code sera conservée par Marie-Chantal Dumas, la répondante locale PERFORMA, et ne sera en aucun moment transmise à la responsable de l'étude.

Les données seront utilisées à des fins de recherche dans le but de répondre aux objectifs scientifiques du projet de recherche décrits dans ce formulaire d'information et de consentement.

Les données du projet de recherche pourront être publiées dans des revues scientifiques ou partagées avec d'autres personnes lors de discussions scientifiques. Aucune publication ou communication scientifique ne renfermera d'information permettant de vous identifier.

Les données recueillies seront conservées, sous clé, pour une période n'excédant pas 2 ans. Après cette période, les données seront détruites. Aucun renseignement permettant d'identifier les personnes qui ont participé à l'étude n'apparaîtra dans quelque documentation que ce soit. À des fins de surveillance et de contrôle, votre dossier de recherche pourrait être consulté par une personne mandatée par le Comité d'éthique de la recherche 'Lettres et sciences humaines', ou par des organismes gouvernementaux mandatés par la loi. Toutes ces personnes et ces organismes adhèrent à une politique de confidentialité.

## CONSENTEMENT LIBRE ET ÉCLAIRÉ

Je, _____ (*nom en caractères d'imprimerie)*, déclare avoir lu et/ou compris le présent formulaire et j'en ai reçu un exemplaire. Je comprends la nature et le motif de ma participation au projet. J'ai eu l'occasion de poser des questions auxquelles on a répondu, à ma satisfaction.
Par la présente, j'accepte librement de participer au projet.


Signature de la participante ou du participant : _____


Fait à Québec, le _____ 2015

## DÉCLARATION DE RESPONSABILITÉ DE LA RESPONSABLE DE L'ÉTUDE

Je, soussignée Joanne Gaultier, responsable de l'étude, m'engage à respecter les obligations énoncées dans ce document et également à vous informer de tout élément qui serait susceptible de modifier la nature de votre consentement.
Signature de la responsable de l'étude : _____

## DÉCLARATION DU RESPONSABLE DE L'OBTENTION DU CONSENTEMENT

Je, MARIE-CHANTAL DUMAS, certifie avoir expliqué à la participante ou au participant intéressé(e) les termes du présent formulaire, avoir répondu aux questions qu'il ou qu'elle m'a posées à cet égard et lui avoir clairement indiqué qu'il ou qu'elle reste, à tout moment, libre de mettre un terme à sa participation au projet de recherche décrit ci-dessus. Je m'engage à garantir le respect des objectifs de l'étude et à respecter la confidentialité.

Signature : _Marie-Chantal Dumas_ Fait à QUÉBEC, le 30 AVRIL 2015.

## APPENDIX F : CONTENT CRITERIA FOR LITERARY ANALYSIS

I.  **AUTHOR**
    (Refer to timeline links, information in the textbook and **do research**)

    **A.** Background (influences) – any elements **reflectedin the writing** (story), any **noteworthy or outstanding facts**

    **B.** Famous Works (overview)
    1.  Genre, style, common theme(s)…
    2.  Literary Trends of the time (& how reflected in story)
    3.  Contemporaries

II. **SETTING & THEME**
    (Refer to pages 6 and 9 plus the questions at the top of page 7 & 10 and **do research**)

    **A.** General setting:
    1.  General epoch, historical period, geographical location (continent)
    2.  Socio-historical context, economic or political context,
    3.  Culture / civilization, society: (only mention the elements that are important to your story), social-cultural, philosophical, Ideological, world vision, values, beliefs, traditions

    **B.** Specific setting: time & location
    1.  External – outside a character
    2.  Internal – inside a character's mind
    3.  **Mood or atmosphere created by using vivid imagery or symbolism**

    **C. Theme:** (in relation to purpose & audience – then and now & impact)
    1.  Value statement, opinion or judgement
    2.  Unifying philosophy on life
    3.  Universal human truth, idea or observation
    4.  Explicitly Stated
    5.  Implied (underlying meaning)

III. **CHARACTERIZATION**
    (Refer to page 8 & the questions at the top of page 9).

    A.  Protagonist: character around which the plot revolves

B. Antagonist: character (element, social force, animal etc.) in conflict with the protagonist.

C. Round characters (well-developed / multi-faceted) or
Dynamic characters (evolve or change)

D. Flat characters (one-dimensional)  or
Static characters (do not evolve or change)

E. Stereotype characters (flat, predictable)

F. **Depicted through:**
   **1.** Description
   **2.** Dialogue
   **3.** Actions


IV.   **NARRATION & POINT OF VIEW** (perspective)
   (Refer to pages 10 & 11 including the questions at the bottom of page 11).

A. First-person Narrator - singular or plural : 'I' or 'we'
B. Third-person Narrator (observer): 'he, she' or 'they'
   1. Omniscient: all-seeing, all-knowing
      a. Objective: facts only
      b. Intrusive:  includes the narrator's opinions and judgements
   2. Limited
C. Multiple Narrators


V.    **PLOT**
   (Refer to pages 4 & 5 including the questions at the bottom of page 5).

   **A.  Dramatic Structure**
      1. Exposition
      2. Complication **/ Conflict**
         a. External
         b. Internal
      3. Rising action / tension
         a. Repeated cycles
         b. Constant
      **4. Climax**
      5. Falling action
      6. Dénouement or resolution
         a. Traditional
         b. Modern
   **B.  Narrative Structure**
      1. Chronological vs. non-chronological

2. Flashback
3. Foreshadowing

## VI. STYLE
(Refer to pages 12 &13 plus the questions at the top of page 14).

### A. Diction (words)
1. Denotation (literal meaning)
2. Connotation (suggested meaning)
3. Level of concreteness (perceptible by senses)
4. Level of abstractness (perceptible by the mind only)
5. **Figures of Speech**
   a. **Simile** (comparison using 'like' or 'as')
   b. **Metaphor** (implied comparison without using 'like' or 'as')
   c. **Personification** (giving human qualities to objects)
6. **Imagery** (appealing to senses through the use of descriptive words)
7. **Irony**
8. **Rhythm:** sounds & patterns
   a. Alliteration (1st letter)
   b. Assonance (vowel sounds)
   c. Consonance (consonant sounds)
   d. Repetition (elements of a sentence: structure, words)
9. **Level of language**
   a. Formal
   b. Informal
   c. Slang
10. **Use of dialogue** (conversation between characters)

### B. Syntax (arrangement of words, phrases & sentences)
Sentence length, word order, & sentence types (simple, compound, complex, incomplete, questions, exclamations…)

**APPENDIX G: SAMPLE OF INSTRUCTIONS FOR SCMC TASKS**

Here are the instructions for the 'peer-expert' or native English partner / Anglophone.

Whenever the student makes an obvious language mistake, you can:

<mark>highlight the word or portion</mark> or use the ~~strikethrough~~ option located in the scroll-down menu under Format.

If your partner is unable to repair the error, you can select the word or portion and click on comment and give them a tip or the correct way to say it. Also, when you see that they need assistance (vocabulary or sentence formation), you can help them finish their sentence in another colour.

It is important that all corrections and assistance in communication stand out in the document. This will allow the students to review after and to post selected errors in their error log.

I recommend that you do a bit of formatting before you start to save you some time and frustration and also to easily identify who says what.

I posted the same instructions on the documents where classmates were paired up.

Sample of instructions for topics:

Analyse a movie you have both seen, using the following literary elements:

- the context
- the setting
- the theme, mood & atmosphere
- the characters
- the plot

Please remember to highlight obvious language errors.

Literary Analysis of 'The Lottery': Try to cover the setting, theme, characters, narration and point of view, plot & narrative structure (foreshadowing or backflashes), and style.

Literary Analysis of 'The Veldt': Try to cover elements such as the setting, theme, characters, narration and point of view, plot & narrative structure (foreshadowing or backflashes), and style.

Type your poem here and discuss it.

This week, I have the following ideas for chat topics:

Instructions for classmates:

Create a 'potential trip itinerary' for a place that your partner has visited, by asking questions or sharing interests, preferences etc. Try to come up with 2 or 3 activities per day for 5 - 7 days. Then, invert the activity and come up with an itinerary for a place you have visited.

Instructions for peer experts:

My students could create a 'potential trip itinerary' for a place that you have visited, by asking you questions or sharing their interests, preferences etc. They could try to come up with 2 or 3 activities per day for 5 - 7 days. Or, if you prefer, you could invert the activity and have them come up with an itinerary for a city you'd potentially like to visit, either in Berlin or Salamanca etc...

The other option could be a literary analysis review of any of the following stories in preparation for your final exam:

1. The Story of an Hour by Kate Chopin
2. The Lady or the Tiger by Frank R. Stockton
3. Tapka by David Bezmozgis
4. The Tell-tale Heart by Edgar Allan Poe
5. The Lottery by Shirley Jackson

You can pick the story or stories that you want.

Please remember to highlight each other's obvious language errors.

Hi Mike, are you there?

If you manage to access this document, could you post some times when it would be convenient for you to do the chat? Thanks, Joanne

# APPENDIX H:OBSERVATIONS AND SAMPLES

1) As Lyster (1998a) discovered in his research, there are many ways that an L1 can help an L2 recognize and correct errors. Here are two examples of improvement reflected within the same task document, where the **peer expert did not point out an error but the learner picked up on the example set** by the native speaker.

**1.** L1/L2 Document: (Set 1A6.1)

A6: It talks about things ==we get through== in our lives…

The peer-expert then writes a sentence using the words: 'things ==we go through== in our lives'.

…later on in the discussion…

A6: This is something ==everybody goes through==.

**2.** L1/L2 Document: (Set 2: B7.7)

The ESL student writes 'technologies'. The peer expert does not correct it but replies using 'technology' twice. The ESL student then consistently uses it correctly.

2) The following is a good example of **how much it can take to undo a fossilized error**.

L1/L2 Document: Set 2 B6

This student keeps writing 'ahah' instead of 'haha'. His/her peer experts do not correct him/her, although they use haha. In chat 1, s/he uses this expression 8 times in 187 words! In chats 3 & 4, s/he has a peer expert who uses haha quite frequently and about half way into chat 4, the ESL student changes to haha one time then stops using the expression for the rest of that chat. In the next chat s/he goes back to using ahah. In

chats 7 & 8, s/he is back with the peer expert who uses 'haha' often and near the end of chat 8, the ESL students consistently uses 'haha' – also in chat 9 (her/his last chat).

3) **L2/L2 Pairs: 'The blind leading the blind'**

These students **rarely point out errors**, and when they do, they **misidentify them**.
(For example in Set 1B7&B8.9documents and also seen in other L2/L2 documents).

We also note that they seem uncomfortable doing so (**excuse themselves**).
Moreover, knowing that their partner shares their mother tongue, they slip in **French words**:
"The protagonist sounds a bit paranoiac, realizing there's a problem with the barriere…"

Finally, in the comment boxes located in the right margin of the document, the students write that they will ask the teacher their questions, however, this never occurred.
(L2/L2 Document: Set 1B3&B7.3&4)

4) Here we have a couple of examples of **informal language in L2/L2 documents**.

    1) A1: Omg I think our chat is over, let´s head back home now and eat food cauz I´m starving. (Set 2 A1 & A3. 1&2)

    2) A9: heeeeeeeelllooooooooo

    A7: Hiiiiyaaaaa! Howdy cowboy

    A9: what's up?

    (Set 2 A7&A9.1)

5) Sample Excerpt of participant B1's **Mid-test** (prior to having used the L1/L2 method). Technical terms and words copied from the textbook are not included in the word count. In preparation for the course Mid-term exam, students were given oral feedback on the content. For the **Post-test**, written comments can be seen to help students prepare for their Final Exam.

II) Specific setting

al settings are ⓧ Nahumovskys apartment, Charles H.
Elementary, Mark's apartment, George Brown City, havi
veterinarian office.
Those settings are situated in Goldfinch in Toronto in (98
there are no internal settings.

Mood and atmosphere of joy and happiness (emanations a
love 21, overwhelming love 21, praise 22), used of the
senses (squeezing, crushing 21, birds and insects fle
are used. Emotions are internal. Senses are external

Themes:
Trust someone you love (have) confidance in yourself, loyalty
towards a dog, relationship in a same ethnical com
immigrants difficulties to adapt.

Characterization.
Protagonist: Mark
Antagonist: Toronto and all the difficulties he encontered
            immigrant
Round characters: Mark → we know his opinions and tho
                  Rita → we know her feelings towards T
                         and her life before she immigra
Flat: Jana → only a few information about her
      Tapka → only physical descriptions
      Mark's parents
Static: Jana, Mark's parents
Dynamic: Mark → his love for Tapka is growing

Sample Excerpt of participant B1's Formative Post-test (after having used the L1/L2 method)

**FORMATIVE POST-TEST**

Wendy & Mrs. Mallard                    *Well-done!*                    B1

- I'm Wendy from *The Veldt*. Ray Bradbury used me to show the consequences of new technology. *[potential]* *[overusing]*

- I'm Mrs. Mallard from *The Story of an Hour*. Throughout all the story I described how many women felt during the end of the 19th century. Many of them couldn't have any political opinions, for example, because they were treated as inferior *as* men.

**Wendy** — Interesting, in my case it is the family's role that is important. At some point in my story, the reader can understand that technological devices are "more important *to me*" than my parents. It's true! Technology provided me *with* entertainement and *took* care *for* me. My parents only wanted to take that away from me and my brother because they were worried. The thing is that they never cared for us. We were happy before my parents started to question the purpose and the role of the nursery. *good coherence* *technology - powered*

**Mrs. M.** — I was happy when I learned my husband was "dead". Finally, I was able to do what I wanted, act as I wished but only in my minds. I didn't have the chance to experience this freedom because I learnt that my husband wasn't dead. All these feelings and expectations of liberty so accessible all of a suden and taken away right after, killed me. *— Exc. coherence*

**Wendy** — Oh, I killed my parents! They didn't understand that technology was too important for me and Peter. I guess if we wouldn't have lived in HappyLife House, our life would have been different. We used so much technology that it became bad for us, according to my parents.
*(refused to) - couldn't live without it.*          *[or relied + depended on]* **4+/253**
*- see comments on other side*

6) Sample excerpt from a screen-sharing task between participant B1 and a peer-expert / native English speaker on Nov. 23 ~3pm

B1: Hi! I need to analyze Sonnet XLIII by Elizabeth Barrett Browning.
…

B1: Thanks for the warning. I'd like to start with the connotation.I know there are a lot of comparison between her love for her husband and her love for the religion. I don't know how to explain it less generally. The theme I found with my partner are passionate love, free will and religion.
…

B1: Connotation stands for suggested meaning.
…

B1: I can continue to tell you what I found yet.
…

B1: EBB use capital letters for some words (Grace, Raise, Praise) to put emphasis.
…

B1: For "childhood's faith" I thought it could be because she loved this man from when she was a child. I guess it is a bit link to what you just said.