

THESIS





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## SYNCHRONOUS COMPUTER-MEDIATED COLLABORATIVE WRITING IN THE ESL CLASSROOM

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<b>M.A</b> .	degree in	Teaching English to Speakers
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# SYNCHRONOUS COMPUTER-MEDIATED COLLABORATIVE WRITING IN THE ESL CLASSROOM

By

Allyssa Blythe Chamberlain

A THESIS

Submitted to Michigan State University in partial fulfillment of the requirements for the degree of

## MASTER OF ARTS

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#### ABSTRACT

# SYNCHRONOUS COMPUTER-MEDIATED COLLABORATIVE WRITING IN THE ESL CLASSROOM

By

#### Allyssa Blythe Chamberlain

This research explores the *transferability* of the internet communication tool (ICT), Googledocs, as a computer supported collaborative learning tool (CSCL) in the ESL classroom. That is, whether the use of this authentic tool—one created specifically for the purpose of facilitating collaboration among *real* people in *real life* contexts—when employed as a writing tool in the language classroom, suggests any advantages for learners. This exploratory study describes the nature of student interaction during the writing process in both environments and compares end results for those environments in question: face-to-face and computer-mediated. Informed by current SLA theory, the current project's descriptive analysis aims at a more concrete conceptualization of what implications for language learning and development Googledocs may have for learners. Also discussed are the pedagogical limitations for and suggested considerations of employing this tool in the language classroom.

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#### ACKNOWLEDGEMENTS

Sometimes you have you watch somebody love something before you can love it yourself. It is as if they are showing you the way. ~Donald Miller

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## KEY TO SYMBOLS AND ABBREVIATIONS

Abbreviation	Key
СМС	Computer-mediated communication
CSCL	Computer supported collaborative learning tool
F2F	Face-to-face
ICT	Internet communication tool
SLA	Second language acquisition

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Our premise, therefore, is that, in considering the future of computer-assisted language learning (CALL), we should continue to leverage educationally oriented, computer-mediated activity, while also remaining aware of the transformational roles many of these collaborative tools play in meaningful language use, both inside and outside of the classroom. A corollary is that, in some cases, mastery of high-frequency and high-stakes mediated genres of communication should also form the explicit goal of educational practice. (Sykes, Oszko, & Thorne, 2008, p. 529)

## CHAPTER ONE INTRODUCTION

The integration of technology into the language classroom has become a topic of interest to many second language acquisition researchers, language educators, higher education administrators, and stakeholders. Recent developments in computer and internet technologies are lighting the way for potential shifts in the nature of the language learning classroom. Although each aforementioned party may look to the implementation of technology in the classroom for different reasons, all share the interest in gaining a better understanding of technology and the implications it may hold for the future of language learning.

The recent birth of Web 2.0 tools, or tools that make it possible to link people not just information, and their increasing popularity as a legitimate means of communication and social interaction in the real world have contributed to a secondary development in the communicative language classroom: the use of these same authentic media as forum not only for language learning but also as authentic arenas of communication and collaborative work (Sykes, Oszko, & Thorne, 2008, p. 528). The L2 composition course, in particular, has felt the effects of this revolution with the integration of blogs and wikis into course writing assignments. Clearly, numerous other tools exist on today's internet, all of which have received various levels of interest in the world of education and language research. Despite rigorous research into the application of many of these technologies, many remain understudied. One such emerging tool, Googledocs, has yet to be examined as a potential venue for collaborative learning in the L2 writing classroom. Googledocs is a collection of Microsoft Office-like online services that allows users to share work online. The current research seeks to explore Googledocs in order to better understand its implications as both a learning tool and an authentic medium of communication in the L2 writing classroom.

#### A Brief History of Technology and Language Learning

Technology is certainly a broad term that has encompassed a variety of pedagogical materials and tools over its long history of use in the language classroom-from studies on the audio input of phonographs and radio in the early 1900s to an extension to the visual input provided by television, film, and videos in the mid-1960s to the possibilities of the computer, internet, and computer-mediated communication (CMC) of today (Salaberry, 2001). Early research with computers often focused on word processing and its implications on the drafting, revision, and editing during the writing process (Siegler, et. al, 1995; O'Hara, 1996 as referenced in Hayes, 1996) as well as on length of the composed essay (Izzo, 1996; Lam & Pennington, 1995; Mehdi, 1994; Silver & Repa, 1993) and overall quality of the essay produced (Jiang, 2001; Lam & Pennington, 1995; Smith, 1993). More recently, research has explored the possibilities for language learning made possible through the internet (e.g., Web 1.0 and Web 2.0). The internet has made readily accessible an extensive bank of authentic media (considered vital by Krashen, 1985) to both teachers and students alike (Arnold, 2007).

According to Blake (2001) such authentic media, "can play a major role in enhancing L2 learners' contact with the target language, especially in the absence of study abroad".

Beyond increased access to authentic language, SLA interactionist researchers have found internet technologies to proffer many other theoretically sound benefits for language learners. Synchronous and/or asynchronous collaborative tasks (e.g., essays written over emails, online text-chat programs, wikis, or Googledocs) provide learners with the output practice thought pivotal to language development by Swain (2001). When attempting to describe the interactions experienced by students engaging in CMC tasks, researchers have noted that the technology has effected greater student participation (Beauvois, 1992; Chun, 1994; Kelm, 1992; Kern, 1995; Warschauer, 1996), equalization of student involvement (Beauvois, 1992; Kern, 1995; Warschauer, 1996), greater learner autonomy and shift in authority (Beauvois, 1992; Chun, 1994; Kern, 1995; Warschauer, Turbee & Roberts, 1996; Wildner-Bassett, 2008), and reduced learner anxiety (Chun, 1994; Kern, 1995). Such collaborative interactions have also led to greater complexity in structures produced (Warschauer, 1996) and improved oral proficiency after online chatting (Beauvois, 1998; Kern, 1995; Warschauer, 1996).

Although all-of-the-above are certainly benefits from an interactionist perspective, perhaps the most poignant effect of CMC is that of reduced learner inhibitions. As Sanders (2005) has written, "When used in a supportive class atmosphere, the reduced inhibition fostered by CMC should result in greater risk taking, confidence, and collaboration" (p. 524). That is, reduced anxiety results in the tendency to create learner-support networks (Darhower, 2002; Feenberg, 1999; Kern, 1995) where collaboration may ensue. Learners are not the only one who benefit from the movement towards CMC in the classroom. CMC offers the possibility of recording student production and interaction during tasks such that collaborative efforts might be evaluated more fairly. The ease of this media means that teachers can regularly assign and evaluate collaborative work while still giving meaningful and individualized feedback to learners. According to Lyddon and Sydorenko (2008), CMC opens the door for a "veritable paradigm shift" that will make continuous assessment feasible, serving to "encourage further growth" in learners (p. 199-201). In this sense, technology permits class time to be reserved for communicative activities which might engage all learners; and, out of class it creates a forum where students might receive added linguistic input and productive output practice, both of which stimulate and sustain learner interest.

Both what is experienced by learners *during* computer-mediated communication and collaboration and what is experienced by teachers *as a result of* computer-mediated communication pair nicely with what is known of learning in general and language acquisition specifically. John Dewey, an American philosopher and educator, believed that, "learners do not learn in isolation; the individual learns by being part of the surrounding community and the world as a whole" (Oxford, 1997, p. 447). Dewey, perhaps the first constructivist, "proposed a triangular relationship for the social construction of ideas among the individual, the community, and the world" (Oxford, 1997, p. 447). Another credited with fathering current theories that have influenced language learning is Vygotsky. Oxford (1997) writes of Vygotsky

Like Dewey, Vygotsky recognized that ideas have social origins; they are constructed through communication with others. An individual's cognitive system

is a result of communication in social groups and cannot be separated from social life (Vygotsky, 1978; 1986). Vygotsky (with Dewey) focused on the individual powerfully rooted in the group context (Donato, 1994; John-Steiner, 1985; Lantolf, 1993). For Vygotsky, the teacher acts as a facilitator or guide and the provider of assistance. (p. 448)

Taking into account the work of Dewey and Vygotsky, it would seem only natural for SLA researchers to promote pedagogical practices that shift the responsibility of learning from the teacher to the student. This shift in mentality from "a sage on the stage" to a "guide on the side" (Fitch as cited in Belz, 2003, p. 117) would ideally be facilitated by tools that allow for authentic communication and social interaction.

Enter Web 2.0. Web 2.0, a term coined by O'Reilly (2005), refers to changes in the way that people are using web applications to communicate (Warschauer & Grimes, 2007, p. 2). Users are moving beyond the use of the web as simply a transmission of information--a linking of information in Web 1.0--to a co-creation of information--a linking of people--in Web 2.0 (Wesch, 2007). Whereas Web 1.0 applications include email, chat rooms, discussion boards, and instant messaging, Web 2.0 includes the social networking and collaborative projects found in blogs, YouTube, and wikis (Kraemer, 2008). Web 2.0 tools, by nature, "support collaborative and individual text and multimedia production" in addition to focusing students' attention on language and its use including morphosyntactic structures, lexical choices, rhetorical style, cohesion, and unity and doing all of these in a media "rooted in, often pluralistic, linguistic and cultural conventions" (Sykes, Oskoz, & Thorne, 2008, p. 530).

The wiki is a Web 2.0 tool whose use has recently entered the language classroom and, as a result, has fueled research into the possibility for and realization of language learning. Not only has the use of CMC technologies proven sound pedagogical practice in the promotion of continued language development, but they have also opened doors to a revolution in the way languages will be taught. Many studies have noted similar learning outcomes of face-to-face, traditional classrooms to online interactive and/or distance-learning education. As language programs and universities face increasing financial challenges, the desirability of reduced costs also increases. Administrators and stakeholders as well as language departments under fiscal constraints want to know the implications of moving some, or all of classroom seat time outside of the classroom's walls (i.e., of employing, in some combination, the use of technology to reduce costs).

## The Future of Technology and Language Learning

Though tentative, the latest generation of distance education "has the potential to decrease significantly the cost of online tuition and thereby increase significantly access to education and training opportunities on a global scale" (Kraemer, 2008, p.21). Research into distance education and the integration of technology as a means to decrease institutional cost has provided mixed results on what the future of education holds for language learners. Several studies have noted that university language departments struggling to meet the demands of increased enrollment concurrent with teacher shortages and budget cuts have become increasingly more interested in technology-enhanced and/or hybrid courses (Blake, 2001; Goertler & Winke, 2008; Sanders, 2005). In a review of a Portland State University Spanish course redesigned to include a CMC component Sanders (2005) reported that the lowered costs, class size, and seat-time, made it possible

for increased enrollment and potential for an even greater increase in enrollment. Alongside these benefits, Sanders reported that the CMC courses maintained student achievement outcomes, but that proficiency, especially writing proficiency worsened. Sanders' (2005) research presents both the promise for new possibilities as well as potential issues for language departments. With that said, it becomes incumbent upon educators to examine the implementation of technology thoroughly so that we might have a firm grasp on its impact on our learners and their language acquisition.

Second language acquisition researchers have already begun this arduous task, yet as technology is ever-changing, there is much yet to be explored. Recent research specifically pertaining to the use of technology as a tool to facilitate writing in the language classroom has included the integration of blogs, wikis, and instant messaging.

Despite the growing body of research in the nature of CMC and its pedagogical implications, one tool that has to date received little attention is Googledocs. Googledocs is a collection of online services that allows users to "create and share [their] work online" (Google, 2010). Because Googledocs store the document on the internet, they are well-suited to a collaborative task because they can function in a synchronous fashion. Googledocs are being used increasingly in both the realm of business and education (Google, 2010).

Sykes, Oszko, and Thorne (2008) have claimed that the future of technology in the classroom rests in the language practitioner's ability to exploit, from an informed stance, the nature of computer mediated activity for educational purposes. Furthermore, tools that not only promote language acquisition, but that also present real-life applications should receive the brunt of the attention. Googledocs is one such tool about

which we as language practitioners have only speculative information. The current study seeks to gain insight into this tool, that by investigating the collaborative writing and revision processes of students using it, language practitioners might come to more fully grasp how this environment might prove a useful language learning tool. This research also attempts to explore how the nature of this particular environment may shape the writing process while maintaining a critical eye so as to avoid technological determinism (Goertler & Winke, 2008). Thus, this the impetus driving the current research project is whether or not students collaborating with this new technology use it in such a way that a case could be made for it as a meaningful language learning tool?

#### CHAPTER TWO THEORETICAL FRAMEWORK AND LITERATURE REVIEW

This chapter deals primarily with introducing the theoretical framework on which the current study is based as well as presenting a review of the literature. The literature review begins with a brief overview of what writing theories tell us about the writing process followed by a discussion of what is known about the writing process in one's L2. After a basic understanding of the writing process has been established, the review turns to research specific to the present study. That is, it reviews research done in writing: with word processors, with peer collaboration, and with Web 2.0 tools. The chapter concludes with an attempt to compare previously researched internet tools (e.g. instant messaging and wikis) with the tool used in the current study, Googledocs, in order to make some predictions about how this tool might function in the language classroom as a computer supported collaborative learning (CSCL) tool.

#### THEORETICAL FRAMEWORK

#### Advantages of Collaborative Learning: Two Perspectives

The practice of collaborative learning in the communicative language classroom is supported by a robust body of SLA research spanning several prominent theoretical frameworks. Each branch, of course, offers its explanations for and own implications of the advantages of collaborative writing. The main vein discussed herein is interactionism, which has a cognitive and a sociocultural branching (e.g., Mackey & Polio, 2009). Interactionists, believing that language learning requires the transmission of knowledge, stand behind the increased opportunity for output and practice (Swain, 2001) because of its function to raise awareness and noticing (Gass, 1997) or because of beliefs that learning is inherently social and thus collaboration naturally pairs here because it alone provides the opportunity for knowledge construction. Regardless of which branch is chosen, a common conclusion clearly emerges--collaboration should benefit learners. I have briefly outlined the major arguments for collaboration from these two perspectives: interactionist and constructivist.

#### The Interactionist View

Like any branch of SLA, interactionist research and thought extends well beyond the brief review presented here; this is not meant as a comprehensive overview but rather as one that highlights the major tenets of interactionism and the research that is most relevant to the current study. See Mackey and Polio (2009) for one interpretation of the interactionist paradigm.

Perhaps most relevant to the current discussion of interactionism and collaboration is Swain's research (1998; 2000; 2001). Her research was born of an attempt to decipher why intermediate learners of French in a rigorous immersion program had failed to reach native-like proficiency, noted that students 1.) spoke infrequently and 2.) rarely spoke more than a few words (Swain, 2001). From these observations came the Output Hypothesis (Swain, 1998; Swain, 2000; Swain & Lapkin, 2002) was a reaction to Krashen's Input Hypothesis (1985). Swain claimed that native-like proficiency could not be achieved through input alone (as Krashen claimed); she advanced three primary processes that occur when learners are prompted to interact: noticing the gap, hypothesis testing, and metalinguistic reflection. She noted that such interactions enabled students to monitor their language and by so doing reach higher proficiency levels.

The (Social) Constructivist View

The idea of social learning originated in Vygotsky's (1978) seminal work on child first language acquisition. Vygotsky's Sociocultural Theory (SCT) holds as its basic tenet the idea that the function of communication is not just to transmit information but also to collaboratively construct new knowledge (Williams, 2005, p. 6). It is through this collaboration that cognitive development is achieved. Vygotsky outlined two paths through which knowledge can be co-constructed: 1.) mediated processes and 2.) activity theory. Lantolf, credited with introducing Vygotskian thought to the realm of SLA, noted three components that constitute mediated processes: 1.) social mediation 2.) selfmediation, and 3.) artifact mediation (Lantolf, 2002).

Social mediation, which is relevant to the current research, deals primarily with the scaffolding that occurs within the zone of proximal development (ZPD). Vygotsky defined the ZPD as "the site where future development is negotiated by the expert and the novice and where assistance is offered, appropriated, refused, and withheld" (as referenced in Lantolf, 2002, p. 105). That is, experts helps novices by mediating (or scaffolding) a task such that the novices are enabled to perform at higher levels than they could have achieved on their own. In his research, Vygotsky noted that the role of the expert was primarily filled by adults or teachers.

SLA research has investigated Vygotsky's claims in relation to the language learner. Research on social mediation in the language classroom indicates that an expert need not be an adult; in fact, instances of scaffolding can (and frequently do) operate beneficially within student peer groups (Donato, 1994; Storch, 2002 as referenced in Storch, 2005). Storch (2005) has furthered,

Thus, from a social constructivist perspective, learners should be encouraged to

participate in activities which foster interaction and co-construction of knowledge. From a pedagogical perspective, the use of small group and pair work is further supported by the communicative approach to L2 instruction and its emphasis on providing learners with opportunities to use the L2. (p. 154)

Research into collaborative peer-pairs from a sociocognitive perspective would look at whether and how knowledge is co-constructed. It would also look for the presence of scaffolding.

To the basic tenet of the "dialogic and inherently social process of knowledge building," constructivist research references work in cognitive science which cites additional cognitive benefits of collaborative learning. Dale (1994) claimed that viewing another person's cognitive processes unfold was helpful in furthering students' own cognitive abilities. In other words, collaboration offers students the rare instance where they might gain insight into the mental processes of their peers. Perhaps by witnessing the processes through which other students approach writing, students might be encouraged to experiment with these new techniques—techniques that they would have otherwise been unfamiliar with or unaware of. The collaboration, then, can serve a demonstrative or training purpose.

Adding to Vygotsky's work is that of Hall (1997). Hall (1997) claimed that since meaning is co-constructed, it must also be viewed holistically. That is,

what learners ultimately learn in the target language and how they learn to do it are tied to the quality and quantity of opportunities they are given to develop competence in using the resources of the practices that are made available to them. Thus any understanding of the development of the individual learner, of the

mechanisms by which he or she comprehends and produces the target language, and of the norms by which his or her language use is to be evaluated can only come from a historical accounting of the context, the symbolic resources used, and the involvement of the other participants in the actual learning process. (Hall, 1997, p. 303)

Hall's conclusion clearly highlights the importance of understanding how context influences the learning process. By extension, exploring the nature of interaction in new learning environments seems necessary to gaining an understanding of an environment's potential for learning.

#### The Present View

In their book, Multiple Perspectives on Interaction: Second Language Research in Honor of Susan M. Gass, Mackey and Polio (2009) have written,

In general, her [Gass'] perspective has been that SLA in fact *must* be interdisciplinary in order to progress as a field, and she has repeatedly made a point of out lining ways in which different research areas can be intergrated through a sharing of insights among theoretical, applied, psycho-, socio, and neuro-linguists, and, of course, language teachers and language professionals

(Gass, 1988, 1993, 1995, 2004 as referenced in Mackey & Polio, 2009, p. 4).

The current research attempts to tap into this same interdisciplinary vein Gass has repeatedly proposed. It seeks to determine what can be said of the benefits of using an internet communication tool (ICT), specifically Googledocs, as an emerging computer supported collaborative learning (CSCL) tool in the second language classroom (Arnold, Ducate, Lomick, & Lord, 2009). That is, it examines the transferability of a real-life tool,

one created specifically for the purpose of facilitating collaboration among *real* people in *real life* contexts, to the classroom. The notion of *transferability* here is operationalized as whether any of the theoretical advantages of collaboration reviewed above (from interactionist, constructionist, and cognitive perspectives) are visible when students collaborate with the ICT, Googledocs. Such transferability would naturally need to address whether or not students are collaborating, how much they are collaborating, and what is the nature of this collaboration.

If the Googledocs ICT is to be a successful CSCL, one would need to demonstrate that some or all of the processes reviewed above are at work during a learner's use of the tool. That is, that a study of student collaboration in a Googledocs environment is congruent with Swain's Output Hypothesis (noticing the gap, hypothesis testing, and metalinguistic reflection), Sociocultural Theory's scaffolding, and/or cognitive science's opportunities to witness the process (Dale, 1994). The current research seeks to offer a comprehensive look at how ESL learners act and interact in the Googledocs learning environment as they attempt to create meaning during a collaborative writing task.

#### Literature Review

#### The L1 Writing Process

Previous to the second language acquisition field's adoption of socialconstructivism, the notions of Vygotsky had been integrated into L1 writing axiologies. Along with expressivism and procedural rhetoric, it has remained one of the prevalent "theories of value" in the field of L1 composition (Fulkerson, 2005, p. 655). Regardless of which guiding theory one ascribes to, the question of how a particular text comes into being, remains a critical topic of interest (Fulkerson, 2005). To this end, composition research since the 1980s has attempted to conceptualize what internal (mental) and external (environmental) factors influence the birth and development of a piece of writing. It is through an understanding of these "pieces" of the writing puzzle that researchers might begin to make observations on, draw conclusions about, and make predictions for the writing process.

Starting in the early part of the 1980s, researchers in L1 composition assumed the task of creating a theory of writing, a task that spanned nearly two decades in coming to fruition (Grabe, 2001). Early models, though certainly proffering some differences, were largely grounded in cognitive psychology and, as a result, focused on the mental processes within the individual (e.g., Flower-Hayes, 1980, 1981; Graves, 1984; Bereiter & Scardamalia, 1987). Perhaps as a result of the theoretical and pedagogical stronghold that social-constructivism took in education, later models emerged that began to account for the presence of the individual and the social context (e.g., Flower, 1994; Hayes, 1996). That is, the models lent greater attention to how the environment interacted with an individual's mental processes in order to shape the writing context and individual's movements within it. Along with these changes came the realization that motivational and affective factors were at work within the individual and thus needed to be accounted for (Hayes, 1996; Kellogg, 1994; 1996 as referenced in Grabe, 2001).

In 1996, Hayes expanded the earlier Hayes-Flower writing model to do just that: he accounted for the role of the task environment and the individual. The former "consists of a social component, which includes the audience, the social environment, and other texts that the writer may read while writing," while the latter is "a physical component, which includes the text that the writer has produced so far and a writing

medium such as a word processor" (Hayes, 1996, p.4). The new model also recognized the influence of "motivation and affect, cognitive processes, working memory, and longterm memory" (p. 4). The model identified the major processes and their minor subprocesses that are at work when a student is in the process of composing a piece of text. See Hayes (1996) for a more in-depth look at the revised model.

The bidirectional arrows in the Hayes (1996) diagram account for the interdependence and long-standing notion of the recursivity (as opposed to linearality) of the writing process. Smith (1984) has defined recursion as a process that is

constantly spiraling back from later to earlier writing, shuttling between a complex, abstract context and one that is simpler, more concrete, replaying a familiar tune in a new key or with new instruments.... Repetition, variation, and sequence can foster exploration and development of ideas, just as they do in music. (p. 460)

Recursion in writing occurs both online (as the author writes and returns to previously written work, i.e., rereading a section to revise or spur on new ideas) and/or during writing tasks involving multiple-sessions (where drafts are planned, written, revisited, and revised).

The revised model also accounts for the social nature of writing. That is, the idea that writing functions as a form of communication. Inherent in such communication is a social context and a medium, both of which impact a particular writing (Hayes, 1996). While writing theorists--past and present--have had varying degrees of success in identifying the critical constituents and their interaction within the writing "puzzle," they have failed to move beyond their theoretical outlines to meaningful descriptions. The

task of applying theories to describe the interaction among particular individuals, contexts, and medium has been left to others. The present research attempts to fill part of this hole: to describe how second language learners of English interact during collaborative writing tasks with a new online tool, Googledocs. This research seeks to describe how the capabilities of the medium might affect the writing processes that occur. *Understanding the L2 Writing Process* 

Early on, L2 writing research shadowed L1 writing theories and its trend toward cognitive psychology (Grabe, 2001). With time, L2 writing scholarship diverged because researchers came to recognize the unique demands on an L2 writer of English such as adapting to different writing values which call for originality, creativity, and critical thinking (Atkinson & Ramanathan, 1995); adjusting to writing tasks that demand response to and explication of texts (Leki & Carson, 1993; 1997); and managing the influence of the L1 on the organization and structure of written arguments (Connor, 1996; Leki, 1997). The studies mentioned here are among many that attempt to describe the differences between L1 and L2 writing; this body of research does not set out to create a writing theory, rather it describes the invisible influences on an L2 writer with the goal of informing writing instruction.

Although L2 writing researchers have thus far not authored theories specific to the L2 writing construct, Grabe (2001) has pointed out that the "environment" factor in Hayes' (1996) model does allow for all of the aforementioned demands on an L2 writer. Where the application of Hayes' (1996) model fails in the L2 context, is the fact that it "makes no effort to account for growing language proficiencies" which are seen as fundamental to describing writing development of a language learner (as quoted in

Grabe, 2001, p. 47). A second model by Grabe and Kaplan (1996) arose from applied linguistics and, as such, made strides towards including a language variable while still incorporating the role that the task environment/context and the individual play in cognition (as referenced in Grabe, 2001).

The call to integrate the developing interlanguage into research on L2 writing has been well-taken. The present study seeks not only to describe how the context and medium affect the writing process during online collaborative writing, but also to account for whether writing in this setting may present a potential for language development. That is, could the authentic use of Googledocs in the ESL classroom prove to be a productive computer supported collaborative language learning tool?

#### L2 Writing with Computers

As previously mentioned, current writing models note the effect that a writing medium has on the mental processes involved in writing and the products produced as a result of those mental processes (e.g., Hayes, 1996). Different task environments put different demands on learners. For example, writing with a computer requires the learner be literate in the use of word processing programs as well as familiar with the keyboard; learners underconfident or unschooled in these computer literacies may find their writing suffer under the costs of using a computer environment. The opposite is also true: computer-literate learners might find the computer to be facilitative of their composing and revision process. The task environment is thus seen to influence the way in which the learners approach and carry out the writing task (O'Hara, 1996 as referenced in Hayes, 1996). "Designers of word processing systems and other writing media should understand that system characteristics can have significant impact on writing processes"

(Hayes, 1996, p.11). Hayes (1996) hints at the necessity of understanding and accurately describing a "system", a point to which we will return to later.

Research on writing with computers has attempted to understand just how much the computer may influence the writing process with comparative studies. These studies sought to determine whether the new medium better facilitated the writing process than its predecessor, the pen and paper. These results have been mixed with some research noting the supposed disadvantages of using computers such as shorter texts (Izzo, 1996); lower quality final products (Smith, 1993); poor organization (Izzo, 1996); inefficiencies of training/use (Izzo, 1996); and difficulties of visualizing formatting (Izzo, 1996) and other research claiming quite the opposite: longer texts (Mehdi, 1994); similar (Izzo, 1996; Lam & Pennington, 1995) and/or higher (Silver & Repa, 1993) quality texts produced. The literature has also suggested that analytic scores for content (Jiang, 2001) as well as vocabulary, language use, and mechanics (Lam & Pennington, 1995) have been higher when texts were written on computers. Computers may result in positive learner attitudes (Mehdi, 1994) or may have no significant affect on improving learner self-esteem (Silver & Repa, 1993).

Further complications have arisen in determining the best medium when describing the revision strategies on computers. It seems that the relative ease of revision afforded by a word processor would pair nicely with the natural recursivity of writing (Eklundh & Kollberg, 1996; Lam, 1991), thus allowing students to produce more fluency in their revisions (Jiang & Cumming, 2001). That is, the word processor on a PC is a tool that "facilitate[s] the mechanical processes of putting words on paper; revising text by substitutions, deletions, additions, and block moves; and producing attractive and

readable finished copy" (Pennington, 2006, p. 298). Even so, research has found that tools like usage and grammar checkers may inhibit normal revision strategies and result in lower quality products (Smith, 1993).

Although at times conflicting, this body of research indicates that composing on the computer is, at the very least, *different* from using pen and paper. In fact, Eklundh and Kollberg (1996) have suggested that the two environments are so different as to involve different mental processes. It seems, thus, that Hayes (1996) was correct when he questioned whether the real issue in writing research is in determining the medium best suited to writing and not in describing each medium in order to understand *how* the nature of it might influence the writing processes that will result.

Recent innovations in how the computer is being used as well as the capabilities for its use have brought increased difficulties to the task of describing the medium and understanding its effects on learner writing. At the same time, this task is becoming increasingly more pressing as Warschauer has noted writing, "Many of our literacy practices in education, work, and social life have moved off the page and onto the screen: more and more people are doing the majority of their writing and reading on computer and transmitting messages electronically rather than on paper" (as quoted in Pennington, 2003, p. 297).

Just as researchers are faced with the task of describing the potential of certain technologies for language development, so too are language practitioners confronted with the reality that they must address the computer literacy needs of learners. Pennington (2003) has said just this, writing

As the communicator of the present day and especially of the future is inevitably

linked to electronic media, those charged with instructing ESL students in writing cannot afford to remain outside these developments, teaching without regard to the communication technologies that are increasingly at the center of their students' world. (p. 297)

To the end of keeping in stride with new technologies, this research has sought to describe a technology that has yet to be studied—Googledocs—so that language instructors might better understand how the integration of this new medium might influence the writing processes of their learners.

#### Collaborative Writing and SLA

Stemming from cognitive and sociocultural interactionist backgrounds and the age-old adage that two heads are better than one is the often-employed classroom practice of collaborative work. What constitutes collaboration has been variously defined. Collaboration is commonly viewed as the act of co-labor, or "working jointly with others or together especially in an intellectual endeavor" (Merriam-Webster Online). A review of collaborative literature as it relates to education echoes the common conception of collaboration, often with an even narrower view (Arnold et al., 2009). In this research, a distinction is often made between the otherwise conflated terms of collaborative and cooperative learning. The former is a construct where "no single hand is visible in the final product" (Haythornthwaite as quoted in Arnold et al., 2009) while the latter "entails division of labor where tasks are split into sub-tasks in advance to be assembled into a larger whole later on" (Arnold et al., 2009, p. 4). Clearly, cooperation is often more efficient. If students just want to finish quickly, they may not wish to collaborate. In the

current study, collaboration is considered Haythornthwaite's (2006) definition where the work of each collaborator is indistinguishable from the others in the end product.

A collaborative writing task, then, pairs or groups learners, assigns them a writing task, and asks them to complete the task collaboratively. Previous research has suggested that what occurs during collaborative writing extends beyond the "two heads are better than one" philosophy noting that, "Distinctly higher order human cognition, including planning (i.e., carrying out action on an ideal plane before doing so on the concrete material plane) and rational thought, arises from [one's] participation in socially mediated activity" (Lantolf, 2007, p. 878).

On the sociocultural front, Zuengler and Miller (2006) have noted the benefits of collaborative work saying, "Of significance for SLA research is the understanding that when learners appropriate mediational means, such as language, made available as they interact in socioculturally meaningful activities, these learners gain control over their own mental activity and can begin to function independently" (p. 30). In accordance with Vygotsky (1978), Zuengler and Miller hold that the goal of collaborative work in the ESL classroom is that learners will develop better cognitive and language skills so that they might function independently in the future.

Apart from the general benefits previously reviewed of collaborative work in the language classroom, proponents of collaborative writing list additional benefits for learners: higher grammatical accuracy and complexity in produced texts (Storch, 2005); learner-motivated negotiation of meaning and focus on the grammatical, lexical, and discourse-level aspects of text (Donato, 1998; Storch, 2002; Swain & Lapkin, 1998; Swain and Lapkin, 2002); aid in the development of analytical and critical skills
(Nystrand & Brandt, 1989); learning of new vocabulary and grammatical forms (Storch, 2001); concretization of a learner's awareness of audience during peer review (Leki & Carson, 1993). Collaboration can provide learners with opportunities for output, noticing the gap, hypothesis testing, and metalinguistic reflection--all of which may be critical to a developing interlanguage (Swain, 1998; Swain, 2000; Swain & Lapkin, 2002).

The mere opportunity for collaboration, however, cannot ensure that effective collaboration will ensue; groups and writing tasks must be selected and constructed carefully. Research has found that the quality of collaborative interaction depends on the individual group and its constituents (Dale, 1994; Johnson, Johnson & Smith, 1991 as referenced in Arnold et al., 2009). Cognitive conflict has been found essential in collaborative work, both in the quality and quantity of the interaction, and that the lack of designed conflict greatly reduced student interaction (Dale, 1994). If the Output Hypothesis is correct, it is precisely this interaction that is beneficial to learning; pairs that do not interact much have lowered opportunities to learn (Storch, 2001).

Writing research has also found that closed writing tasks (Blake, 2000; Leki & Carson, 1997; Pellettieri, 2000) promote negotiation because closed tasks, as opposed to open tasks, have right answers. That is, writers must "accurately reflect" the content of the source-text and, in so doing "the writer's representation of that content is discussable--explainable--negotiable" (Carson, 2001, p. 198). Pellettieri (2000) found that goal-oriented closed-tasks were positively correlated with quantity and type of negotiations (i.e. form-focused negotiations) while Blake (2000) found similar benefits to closed-tasks but noted that students tended to focus on surface, lexical negotiations rather than content-related ones.

Perhaps the most comprehensive study noted here (and one which the current research draws on heavily) is Storch's (2005) research which attempted to gain insight into the collaborative versus individual writing process and to determine whether or not one treatment held significant learning gains over the other. Storch examined both treatments' written production as well as the collaborative groups' oral production. As for the written production, she examined it quantitatively (fluency, accuracy, and complexity) as well as qualitatively (a holistic scale measuring content and structure). The dialogues were divided into total time spent on each area of planning, writing, and revision. Her findings have suggested that collaborative writing, although generally limiting the length of a piece, facilitates grammatical accuracy, sentential complexity, and raises overall qualitative scores above that of both the class average and of students who chose to work individually.

## Innovative Ways to Teach Writing with Technology: Past and Current

So far the studies reviewed have included L2 collaborative writing in the traditional face-to-face (F2F) classroom setting. Recent budgetary and personnel demands (Blake, 2001; Goertler & Winke, 2008; Sanders, 2005) in addition to advancements in technology have made it both necessary and possible for collaborative writing to assume a new shape. As the demand and possibility for innovative ways to teach writing grow, research has moved away from viewing technology as inherently neutral (e.g., Levy, 1997; Means, 1994 as referenced in Smith, Alvarez-Torres, and Zhao, 2003) or biased (e.g., Bromley, 1998 as referenced in Smith, Alvarez-Torres, and Zhao,

tread is describing the nature of these new technologies and their use in the classroom (Barton, 1994 as referenced in Ortega, 1997).

#### Past: The Word Processor

Early research into the use and integration of technology into the classroom focused primarily on the use of computers during writing tasks and the effects the new medium had on the 1.) quality of the written products (Eklundh & Kollberg, 1996; Izzo, 1996; Jiang, 2001; Lam & Pennington, 1995; Mehdi, 1994; Silver & Repa, 1993; Smith, 1993); 2.) the student reactions (Mehdi, 1994; Silver & Repa, 1993); and 3.) revision strategies/process (Eklundh & Kollberg, 1996; Jiang, 2001; Lam, 1991; Pennington, 2006; Smith, 1993).

#### Current: The Web 2.0

With the continuous changes in the internet since its birth in the 1990s, what has been made possible with computers has fundamentally changed. Whereas Web 1.0 gave people, originally scientists, a means to share a wide variety of information and research, Web 2.0 is "a very different thing. It's a tool for bringing together the small contributions of millions of people and making them matter. Silicon Valley consultants call it Web 2.0, as if it were a new version of some old software. But it's really a revolution" (Grossman, 2006).

Web 2.0 has been both criticized as a "meaningless marketing buzzword" and praised as the "new conventional wisdom" (O'Reilly, 2005). Whatever one's attitude towards the phrase may be, what is happening on the web is described as, "a story about community and collaboration on a scale never seen before. It's about the cosmic compendium of knowledge Wikipedia and the million-channel people's network YouTube

and the online metropolis MySpace. It's about the many wresting power from the few and helping one another for nothing and how that will not only change the world, but also change the way the world changes" (Grossman, 2006).

Grossman's description, however, is not complete. While it is true that Web 2.0 allows people to "harness collective intelligence" through multi-channel sharing and building of a "global brain," it must be clarified that the changes in this so-called revolution of 2.0-ness are "not something new, but rather a fuller realization of the true potential of the web platform" (O'Reilly, 2005). That is, Web 2.0 refers to the *changes* in the "communicative uses of the underlying Web platform" (Warschauer & Grimes, 2008). With Web 2.0 people are *participating* in the dynamism of the internet, rather than just using it as a static entity. Different from Web 1.0, where only the knowledgeable coder could publish and the less-savvy rest of us could only passively view this information, the new "interactive publishing" allows for "participation and networking through blogs, wikis, and social network sites" (Warschauer & Grimes, 2008, p. 2). According to his YouTube video, "Web 2.0 The Machine is Us/ing Us," Wesch (2007) illustrates how the new web "facilitates data exchange, combining information" such that "Web 2.0 is linking people [not information], people sharing, trading, and collaborating."

Today, the examples of internet technology that link people include the now common social networks (e.g., MySpace, Facebook, & Friendster), multiple-editor web pages (e.g. Wikipedia), and computer mediated communication (CMC) (e.g. email, instant messaging, internet phone), etc. Of interest in the current study, and to which I will now turn, is the last category: computer mediated communication.

## CMC and Collaborative Writing

Perhaps nothing inherent in CMC's nature forces collaboration. However, as technology has advanced and multiple user environments and applications made available through Web 2.0 have become wide-spread, the tools available in computer mediated contexts increasingly involve and/or require a certain level of cooperation (and, at times, even collaboration). It is these later applications that have come to be (perhaps auspiciously) coupled with SLA's sociocultural approaches which hold as their primary tenet the belief that the root of learning is the interactions held within social situations.

At the same time that CMC has changed the learner-interaction (and perhaps even the process, similar to how the word processor changed writing), it has also changed the method for data collection.

Research has examined the nature of CMC technology and the promise it may hold for second language learning. It should be understood early on in this discussion that the tendency to lump all CMC technology together has been considered a grave misrepresentation of the technologies in question (Smith, Alvarez-Torres, & Zhao, 2003). Rather, CMC technologies should be differentiated based on the following descriptors: temporality, anonymity, modality, and spatiality. One might also carefully consider adding context which would include the capacity in which the technologies are being used (Goertler, personal communication, March 2, 2010). For example, context would be whether the task is supervised in the classroom or assigned outside as well as how that assignment was framed. In short, the *nature* of a consumer's interaction (and the latter perceptions of the interface/interaction) largely depends on the *nature* of the interface.<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> Readers will notes how similar Smith, Alvares-Torres, and Zhao's (2003) point is to earlier claims made by Hayes (1996) referring to the need to describe the system in which a writer functions in order to attempt to predict or understand the processes of the writer.

Thus, any research on CMC must first begin with an understanding of the technology and context in question as both of these will influence learners' 1.) interactions with the technology and other interlocutors and 2.) expectations of the technology and the interlocutor(s) (Smith et. al, 2003). For example, Zhao (1998) found that senders may consider their message more carefully when they know that the receiver will have immediate access to their message (i.e., in a synchronous context) while the message's recipient, in turn, may feel the pressure to respond immediately. This pressure may or may not be increased or lessened depending on whether or the students are communicating in the same space, as is artificially produced in classroom use of these tools. Such a critical examination of technology is not only imperative when carrying out research, but also when planning to integrate technology use into the classroom.

# Googledocs

Googledocs is one interface that enables people-linking. Essentially, Googledocs is a collection of online services that allows users to "create and share [their] work online" (Google, 2010). Like other services in the Web 2.0 environment, Googledocs does not rely on the PC or desktop to carry and store software. Rather, its services (e.g. spreadsheets, word processing documents, and presentation software) are all accessed and saved on the internet. Because this is the case, files created in or uploaded to Googledocs are editable from any location without the need upload or download documents to and from a desktop. True to other Web 2.0 services, Googledocs also provides its users with the option to share access to documents with other online users; and, because any document revisions are done over the internet, these changes are shared with collaborators in real time. That is, Googledocs allows multiple users to collaborate both

synchronously and asynchronously and for the text revisions to be transmitted in near-real time to all collaborators.

*Googledocs in relation to other online tools.* As there is no research that I am aware of in the literature specific to Googledocs, it therefore seems necessary to highlight the major findings of research of the closest relative that has received some attention, the wiki. Table 1 below compares Googledocs and wikis according to the descriptors outlined in Smith et. Al (2003). For the purposes of comparison, let us assume that both the Googledocs and wikis of which we speak are ones that are assigned as part of a course's assignments.

Table 1

Googl	edocs	Versus	Wikis
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Descriptor	Googledocs	Wikis
Temporality (Synchronous or Asynchronous)	Synchronous or asynchronous	Asynchronously
Anonymity (Anonymous or known identity)	Ranges from semi- anonymous (if use pseudo screenname) to known because edits to docs show up in log file under user's screen name	Ranges from semi-anonymous (if use pseudo screenname) to known because edits to wiki show up in log file under user's screen name
Modality (Audio, Video, Graphics)	Written text, charts, graphs	Written text, images, selected wikis allow for audio embedding
Spatiality (proxemics)	Distant (no noticeable human presence in edits)	Distant (no noticeable human presence in edits)
Context (In classroom)	Classroom, work, leisure.	Classroom, work, leisure.

Research studies involving wikis have found a number of user behaviors that are of interest in the current study. In an exploratory research study on the nature of studentled collaboration during the construction of class wikis, Kessler and Bikowski (2010) found that student groups moved through three phases of collaboration: construction with deletions/rebuilding; expansion and participation; and personalization. In the first stage, students tended to add and delete content from the areas they were personally responsible for. There was little evidence of critical thinking in terms of synthesizing material across student content. The final stage involved an "email-like" exchange which often strayed from the content of the wiki. Other findings included that some students only minimally participated (fulfilling the bare minimum requirements and then choosing to observe others through the rest of the semester). Students reported finding the activity helpful but what was expected of their role in the project ambiguous. To remedy these mild complaints, Kessler and Bikowski (2010) recommended a discussion of the challenges of the project in a pre-task training session.

Arnold et al. (2009) found that students mostly made meaning-changes and that once content was added to the wiki page, it was not deleted. Unlike previous studies predicted of a collaborative tool such as wikis, students did not exhibit behaviors consistent with co-ownership; rather, they utilized the tool as a means towards division of labor and thus increased efficiency. Mak and Coniam (2008) similarly found that the addition of new ideas dominated the majority of student input onto the class wiki; little revisions were made to the pre-existing content from earlier in the semester.

Beyond what behaviors students exhibit while collaborating with CMC and/or SCMC tools, research with such technology offers the added benefit of gaining insight

into collaborative work and the students' mental processes. Oskoz and Elola (2008) have found that wikis + voice/written chat provides more in-depth information about the development of student drafts over time (as referenced in Sykes, Oskoz, &Thorne, 2008).

Other pedagogically-driven research is not so optimistic, some of it going so far as to alert teachers to its potential downfall when integrated into classroom activities. Schneider and von der Emde (2006) noted student sensitivity to certain issues assigned to be discussed and found that students from two cultural backgrounds (German and American) confronted serious difficulties when asked to discuss gun control (Kötter, 2006 as referenced in Fischer, 2007, p. 423). Cultural differences in methods of communication such as formality (formal versus informal in European versus American students) and directness (direct versus indirect in French and German versus American students) also fueled controversy in O'Dowd (2006) and Bauer, deBenedette, Furstenberg, Levet, and Waryn (2006), respectively. While it may be true that social interaction provides ample opportunity for language learning, it might be equally true that such interaction may prompt conflict. And, for the purposes of SLA research this conflict is worth noting since it "can have a noticeable effect on the quality of communication" (Fischer, 2007, p. 423).

#### Collaborative writing, CMC, and SLA

As noted earlier, universities are being bombarded with a variety of fiscal demands that make support of SCMC all the more appealing. Research into SCMC offers additional benefits to the list. Citing multiple studies, Kaufman (2004) wrote, "Computer, video, and wireless technologies have provided optimal media for the application of constructivist principles to learning and teaching, created communities of

learners in electronic learning environments, and greatly enhanced student achievement and teacher learning" (p. 306). Fortune (2005) added that these extended communities have brought the ESL classroom into step with our globalizing society. The majority of research drawing on interactionism has found that SCMC is the best way to promote negotiation of meaning online (Kitade, 2000; Kötter, 2003; Toyoda & Harrison, 2002; Tudini, 2003 as referenced in Kern, Ware, & Warschauer, 2004).

Traditionally, research into the collaborative writing process has had to rely on voice-recorded student-talk to indicate the content of the communication between group members during collaborative work. And, this research has given us plenty of valuable information on the content of learner-talk. For example, Swain's (2001) research found that during collaborative writing learners used a significant amount of meta-talk and experienced multiple language related episodes (LREs) that indicated a strong natural inclination towards focusing on form. Swain and Lapkin (1995) have defined LREs as those parts during a dialogue where learners talk about, question, or correct the language that they or their partners are producing (as referenced in Swain & Lapkin, 2002). The use of CMC and/or SCMC has added benefits to gaining insight into collaborative work and the students' mental processes. Oskoz and Elola (2008) have found that wikis + voice/written chat provides more in-dept information about the development of student drafts over time (as referenced in Sykes et. al, 2008).

Other studies have more specifically targeted one type of SCMC—text-based chat. Text-based chat is where people type messages to each other concurrently in realtime using the Internet as an interface. The language used tends to be more conversational than formal. Because it is more colloquial than formal, sentence fragments

tend to proliferate (Boehlke, 2003). Text-chat is easy to use (many students already being familiar with the technology from their socializing in their L1) and presents many options in the classroom for co-construction of writings. Healy (1997) found that chat provided greater benefits to the learner because it "effectively bridg[ed] the gap between written and oral expression for the linguistically limited student whose oral skills are not adequate to allow for full expression of ideas in the target language" (as quoted in Boehlke, 2003, p. 68). Studies involving text-chat have focused variously on students' behavior and identity in this virtual environment (Kemp, 1993; Kessler, 2009); the outcome (i.e., written production) of the collaboration (Braine, 2001); comparison of the SCMC and the F2F environments (LREs-Shekary & Tahririan, 2006); amount of discussion (Kemp, 2003; Kern, 1995, Warschauer, 1996; Boehlke, 2003); transfer of chat-learning to subsequent novel situations (Blake, 2009; DiMatteo, 1991); effect of chat on oral proficiency (Blake, 2009). No known studies have compared F2F and text-chat collaboration through an examination of both the writing process and the subsequent written production.

# Collaboration and Beyond

Collaboration is of interest beyond the four walls of the language classroom as well. In fact, collaboration in the workplace is an ever-increasing trend. And while collaboration on text documents comprises only part of workplace collaboration, it certainly is an important one because work groups must frequently work together to produce texts (Hutchins, 1995 as referenced in Hayes, 1996). The integration of collaboration into the classroom, then, serves not only to increase a.) the opportunities for output practice and peer-peer interaction, b.) the likelihood that students will engage in

higher-order processing, and c.) the quality and complexity of the text produced, but also serves to aid learners in developing necessary life skills.

## CHAPTER THREE METHODOLOGY

The previous chapter offered a brief overview of the theoretical framework from which this study draws as well as presenting a review of the research that has been done in the field of writing, SLA, and CALL. Although a large body of research on L2 writing, collaborative writing in the L2, and writing in the L2 with computers exists, research that combines all of these remains relatively small. In fact, such combined research is primarily confined to studies in CALL and has focused on popular ICTs (e.g., instant messaging) and asynchronous collaborative writing tools (e.g., wikis and blogs). As the classroom environment continues to shift both in response to fiscal restraints of language programs and to changes in the society at large, research into other emerging computer supported collaborative learning (CSCL) tools which allow for synchronous interaction, such as Googledocs, becomes an increasing concern of researchers and educators alike.

#### Research questions

In an attempt to advance our understanding of the nature of students' collaborative writing processes using Googledocs, the current study set out to answer the following research questions:

1. What are the student perceptions of the two environments (F2F and CMC) in terms of achieving students' language learning goals and are these perceptions confirmed by the research findings?

2. What is the content of student talk during the composition process in a CMC writing environment? How does this content compare with the same or similar writing task in a F2F environment?

3. How do the planning, collaboration, and peer revising influence the development of the essays? Are these processes different between the CMC and F2F tasks?

4. Do the students in these two environments produce qualitatively different products?

#### **Participants**

Participants in the present study were nonnative speakers of English enrolled in an Intensive English Program (IEP) at a large, mid-western research university. This language study preceded their enrollment in regular academic classes at the university. The students (n= 21) were classified as high-intermediate/advanced proficiency based on an in-house English language test. They came from a variety of L1 backgrounds: Arabic (1), Chinese (13), Japanese (2), Korean (4), and Italian (1) and ranged in age from 19 to 27 years.

# Case Study Participants

In order to get an in-depth look at the nature of Googledocs in respect to research questions two, three, and four, two case study students were followed through all four writing tasks. These case study students were picked because they were of the few who were never paired together such that, by studying them, I was able to study a wider sample of the total class. Also, since a large part of this study's purpose is to inform pedagogical practices, it was deemed important to pick two students of differing language proficiencies as they would more accurately represent the variety of learners typical in an ESL classroom. The first case study participant (EU) was a 22 year-old L1 Korean female student. She was studying at the Language Center as part of her junior-year study abroad. In a self-evaluation, EU reported low proficiency in typing and English skills. The second case study participant (MC) was a 20 year-old L1 Chinese female student. She was studying at the Language Center in preparation for matriculation into regular academic courses at the university. MC self-reported high proficiency in use of the computer and the English language. Both students attended classes regularly and were present during the training session and all four writing tasks.

#### Procedures

Paired participants engaged in four collaboratively written essays over the course of the second-half of a semester-long IEP writing-content-grammar class. When it was possible, students were paired with a new partner for each new writing task. Each of the four writing assignments was completed approximately two weeks apart. Three of the four writing sessions occurred within the 120-minute regularly scheduled writing course and lasted 90 minutes. The extra class time before and after was used to address any questions about the prompt and to debrief on the particular writing task, respectively. The class was divided into two subsets, each subset with a variety of skills and L1s. Originally, it was intended that the subsets would flip-flop through the four tasks as seen in Table 2 below.

	Week 1 Environment	Week 4 Environment	Week 5 Environment	Week 7 Environment
Subsets				
A (10 students)	СМС	F2F	СМС	F2F
B (11 students)	F2F	СМС	F2F	СМС

**Original Plan for Counterbalanced Tasks** 

Because of several unforeseeable problems (e.g., absences during training session, availability of computer labs), the original counterbalancing had to be modified as reflected in Table 3 below. Although not an ideal research situation, this revised version allowed me to investigate the applicability of Googledocs as they might be used authentically in a classroom (i.e., to assign unsupervised collaborative work to be completed outside of the classroom).

# Table 3

	Week 1 Environment	Week 3 Environment	Week 5 Environment	Week 7 Environment
Subsets				
A (6 students)	СМС	F2F	All students F2F	All students
B (14 students)	F2F	CMC	· ····	СМС

Since the writing tasks were built in to the syllabus for the course, participants were required to attend and participate in all 4 writing sessions. Participation in the study, however, was voluntary, and students were made aware through a third-party of their rights to decline having their data included in the current research. Collaborative groups included 2 students, with the exception of a 3-person group when all 21 students

were present. All but two students participated in all four writing sessions using Google Documents with a partner; for all students, two of the essays were written F2F and two in a CMC environment although these task environments were not counterbalanced for all participants (see Table 3 above). In order to allay student fears of "fairness" and because student attendance was not always predictable, student-pairs changed with each essay. *Class Description, Context, and Writing Environment* 

Students in this writing course were familiar with the writing process (prewriting/brainstorming activities, writing, reviewing/revising) because the course involved a variety of assignments in addition to the 4 reviewed in the current research. As part of the regular IEP curriculum, all students participated in a three-day learner training program, parts of which involved training in the role of collaboration and group work in a communicative language learning program as well as general teacher expectations of group work. Additionally, all students were specifically trained on how to review a peer's draft in a peer review. Peer review, focusing on feedback about content, development, and organization, was stressed over peer editing.

From the beginning of the semester until mid-terms, students spent approximately 25% of in-class and out-of-class time reading and analyzing short stories (Chopin, 1894; Collier, 1952; Maupassant, 1952; Saroyan, 1952) as well as watching, discussing, and analyzing movies (Erickson, 1993; Haft, 1989). These assignments comprised the content component of the writing-content-grammar course. Adapting Daniels' (2001) pedagogical model for literature circles,<sup>2</sup> student groups lead their own small-group discussion on pieces of literature. This was done by students self-assigning specific roles to each of the four group members. Whole-class discussions and a second round of

<sup>&</sup>lt;sup>2</sup> See Appendix D for example adaptations and roles

individual free-writes followed these in-class small group discussions. Students thus participated in the collaborative assignments after extensive individual and group work with both the literature and the movies. Therefore, assuming students had regularly attended and participated in class, each student had a variety of previous writings and notes on each reading and movie such that they were appropriately prepared to write on the content of the course.

All writing sessions were conducted in a university computer desktop laboratory. The room sizes ranged from small (capacity for 16) to large (capacity for 30). Students working in F2F pairs were sitting at and sharing one computer. CMC pairs, on the other hand, were dispersed throughout the room such that one row of computers might have a mixture of both task environments. All computer labs had data projectors onto which a large, digital clock was displayed for the entire ninety minutes. There were three video cameras placed in the room: one in the back (capturing the computer screens), one to the side of room (capturing an angle of almost all students), and one in the front (capturing the student's faces). Students were permitted to have out any and all of their own original notes, handouts, and/or original texts.

#### Pilot Study

The writing prompts were evaluated by a second IEP teacher who had previously taught the course with the same content (i.e., the same short stories and movies). An SLA researcher with expertise in writing reviewed all prompts and directions; feedback from this review was incorporated into revisions to the formatting and content of these components, where appropriate. Then, a pilot study was conducted with four advanced ESL learners two weeks prior to the beginning of the in-class writing tasks. Feedback

from the pilot made it clear that a more extensive training session to familiarize students with the interface would be necessary than had been previously planned. An hour-long practice simulation was thus scheduled. The students in the pilot also requested more explicit directions about what was expected of them as well as strategies they might use to accomplish the task.

# Training session

Seventeen of the twenty-one participants were present in class during the hourlong training session. As a result of the feedback from the pilot study, the task began with an overview of the rules of the task and how it would be graded. The teacher gave a PowerPoint presentation making it explicit that the task was going to be graded on both the *process* in terms of collaboration and participation of both students as well as the *product* in terms of the quality of the final essay product. Students were made aware that the essay would be graded in accordance with the standard holistic writing assignment rubric from class which focused on content, development, organization, and language use (see Appendix A).

All participants were shown how to use the text-based chat feature of Gmail to communicate with their partner over the internet while composing an essay in a Googledocs. The researcher also explained how Googledocs works in terms of saving information over the internet such that a short delay would allow them to see their partner's additions to the document. Students were told that the program automatically saved their writing but that they could also manually save by clicking on the file icon (just like in a Word document).

at t exa exp log be **c**01 **c**0 di W s C While the teacher-researcher did not include the revision views and their function at the time of training, the basic functioning of the program was explained through some examples projected for the class over the data projector. The teacher-researcher also explained that text-chat and Googledocs edits were digitally recorded on internet server logs. This made some students anxious because they thought their work would somehow be lost, and they would lose credit for the assignment. Despite a demonstration to the contrary, some students still felt more comfortable emailing me their final draft after completing the assignment in Googledocs.

After this brief introductory lecture, students were given partners and a scaleddown practice writing prompt and allowed to begin writing and familiarizing themselves with the interface. This low-stakes training session included practice using the direction sheets to navigate the internet, log into Gmail, access the Googledocs, and use the computer text-chat and Googledocs. Following the training session, the class debriefed about the task in regards to any expertise and/or strategies they discovered while working through the practice task. This sharing of information served to minimize anxiety levels and questions during the actual experiment. Research has shown that one major impediment to successful CALL learning is lack of training (e.g., Hubbard, 2004); a corollary of this is how important training is in reducing frustrations and prepping students for success.

# Writing Task

Prior to the writing session, twenty Google accounts were created under pseudonyms. Then, the researcher created ten Googledocs, entered the writing prompt, and shared the documents through the independent Google accounts. Each pair had one

Googledocs in which they were to type their essays, regardless of whether they were completing the task in a F2F or SCMC setting. Students were also given a hard copy of the prompt as well as a detailed instruction sheet to access the document.

The writing prompts were situated within the context of the content portion of the writing class. That is, they were relevant to the class discussions and class work that had been completed in previous class sessions. In this sense, the prompts were closed-ended and text-responsible as described by Leki and Carson (1997) so as to be "discussable— explainable—negotiable" (Carson, 2001, p. 198). Writing prompts were also created to force conflict (Dale, 1994) as they required students to present and defend their opinions.

In 4 subsequent sessions, participants logged on to computers, were given the essay prompts, and were given ninety minutes to complete the task. These tasks were audio and video recorded. During the ninety-minute writing sessions, students were permitted to refer to any of their own or their partner's notes and/or writings as well as the source texts but, in the interest of keeping students on-task, were not permitted to share between paired writing groups. Use of any other outside sources was strictly prohibited and video cameras were ostensibly set up in the classroom to curb any temptation to violate these rules.

#### Post-task

Following each writing session, participants debriefed orally on that particular writing task and then student questionnaires were distributed to be completed as a homework assignment. Although students were not specifically required to continue working with the text created in these writing sessions, they were encouraged to consider using some of the ideas generated in the collaborative writing sessions in subsequent

formal papers or to revise the collaborative essays for inclusion in their semester-final writing portfolios.

# Data Analysis

# Googledocs Revision History

Googledocs periodically saves to the written text being editing. These saves include both the frequent Googledocs-initiated saves (occurring approximately every minute) and the student-initiated saves (varying in frequency depending on the pair's and individual's saving habits). The record of revisions can be accessed for each document by viewing the "revision history". An individual typing into Googledocs would have a screen much like a Word document. A sample screen shot is shown in Figure 2 below.



# This is me writing an example sentence in Googledocs.



# Figure 1. A Screenshot of Googledocs

When used synchronously, both collaborators can contribute to and edit the document at the same time. There is a short delay as each person's Googledocs saves the information and then transmits it to all collaborators. So, a collaborator might take the sentence in

Figure 2 above and edit it as shown in Figure 3 below.



Figure 2. A Screenshot of a Second Person Editing the Googledocs

The third screen shot below shows the revision history page (See Figure 4). This is the first of the two revision views available in Googledocs. This screen allows you to select to revisions to compare.

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Figure 3. Googledocs "Revision History" Screen Shot

After one has selected revisions to compare, Googledocs will then color-code the revisions based on who made the revision. See Figure 5 below for a screen shot of this. The color-coding scheme works best when texts are constructed asynchronously, as will be explained below.



Figure 4. Screenshot of Googledocs "Compare" Revisions Page

The second of the two options available when reviewing the revision histories, is to skim through the revisions in pseudo real-time. I say "pseudo" because, when two people are editing synchronously, Googledocs is also saving their work synchronously. This means that, assuming that both collaborators are actively editing, the revision logs jump between the revisions that collaborator A is creating and the saves that are occurring in parallel on collaborator B's screen. To an inexperienced viewer expecting a true real-time recounting of the synchronous collaboration, it might seem like collaborator B is deleting collaborator A's work and then proceeding to add precisely what he/she just deleted. Although this makes for messy data collection, the advantage to this small delay is that the collaborative experience can be recreated. Once one establishes who is making a revision, the researcher is able to see how quickly and how noticeable the revisions that are being transmitted truly are.

A record of Googledocs saves was analyzed using a modified version of Faigley and Witte's (1981) coding scheme. The Faigley and Witte's (1981) taxonomy was chosen because it has been used in a variety of research involving both L1 and L2 writing (e.g., Connor & Asenavage 1994; Min, 2006; Paulus, 1999). The taxonomy was also recently adapted in a study of collaboration and revision behavior in a class wiki project (Arnold et. al, 2010) and shown to be a useful and reasonable instrument when applied to CMC environments. Finally, Faigley and Witte's (1981) taxonomy seems fitting because Googledocs is a collaborative tool that records revision history. It therefore seems appropriate to analyze the revision history with a measure has been used to analyze the revision of written texts.

Faigley and Witte (1981) developed their taxonomy based on two major distinctions: surface changes and text-based changes. This major branching divides those changes which, through addition or deletion of information, result in a change "*that it* [meaning] *cannot be recovered through drawing inferences*" (Faigley & Witte, 1981, p. 402). The former (surface changes) leave a reader with enough information to infer whatever information may have been deleted while the latter (text-based changes) make such inferences impossible. Surface changes are further subdivided into formal changes (spelling; tense, number, and modality; abbreviation; punctuation; and format) and meaning-preserving changes (additions; deletions; substitutions; permutations; distributions; and consolidations). On the second branch lie the text-based changes which include microstructure and macrostructure changes. The distinction between these

two revisions lies in the fact that the former revisions do no alter the overall summary (or gist) of a text whereas the latter do. Since some (Arnold, Ducate, & Kost, 2009; Polio, personal communication, March 12, 2010) have found this last distinction between macro and micro structures cumbersome and unproductive, I have chosen to disregard it.

Following previous studies applying oral data coding schemes to CMC data (e.g. Pellettieri, 2000), all F2F sessions were transcribed verbatim. Some CMC groups chose to chat both in the Googledoc itself and/or in the Gmail chat window; both of these chat histories were included in the analysis of chat logs. The oral transcripts and CMC chat logs were coded following an adapted version of Storch (2005). Storch (2005) looked at the discussion content of a collaborative writing task in a F2F environment. Storch (2005) first divided transcripts into the planning, writing, and revision phases before looking for topical focus areas that occurred emically. An adapted version of those themes can be found in Table 4 on the next page. For the purposes of this study, "task clarification" included any questions about the prompt and general directions for the task or tools involved (directed towards the teacher or a peer); "task management" included discussion about time or how the task would or should be carried out (e.g. division of labor); and, "organization" (formerly "structure") encompassed all episodes where learners talked about how the essay should be organized. Table 4 below summarizes the coding categories from Storch (2005) and offers some examples from the current project.

# Table 4

Focus area	Description	Example
Task Clarification	Episodes where learners read or discuss the given instructions	EU: we have to show the authors' thought and compare it with our thought? AL: Where did it say?on the paper? EU: yeah
Task Management	Episodes in which the learners deliberate over and delegate tasks	EU: Then, how about separate the part? For example, one write the intro and conclusion and the other write the 2 bodies? FE: Yes. This is what I did before
Generating Ideas	Episodes where learners generate and reformulate ideas	MC: now what you wanna write about?
LREs	Episodes in which the learners deliberate over lexical or grammatical choices (Swain & Lapkin, 1998)	EU: Mr. Keating have CH: haaaaas. Has. EU: has
Organization	Episodes where learners focus on the organization of ideas	SE: How bout just dividing into two parts. Like the Lottery novels is talking aobut the wrong way of morality and this horse story is talking aobut the right way of morality

# Storch (2005) adapted coding scheme

Table 4 (cont'd).		
Reading/re-reading	Episodes in which the learners simply read or re-read the text they had composed (only captured in F2F environment)	SE [narrates & types]: The two authorstalk about morality between right and wrong. [re-reads] The two authors talk about morality between right and wrongway.

Following each task, students completed a survey that contained a self- and peerassessment as well as nine questions on a 5-point Likert scale and a number of openended questions. The nine questions asked students to respond to the collaboration, the task environment, and their perception of their learning during the session. The openended questions asked students to summarize what worked well/poorly in the collaborative session and why, as well as what they found challenging and easy about the task environment. They were also asked to describe how their pair went about completing the task and to which parts of the collaborative effort they had contributed (See Appendix B). All returned surveys are reported in the data analysis.

Two raters met to discuss and grade the final compositions of the eight essays included in the case-study. The raters read the essays, making comments about the same categories with which students were familiar (i.e., content, development, organization, and language see again) (See Appendix A). They were then asked what grade they would give such an assignment on a 4.0 scale (where 2.5 is passing and only 0.5 increments are allowed). The grades for each essay were then recorded and averaged.

All of these data, the Googledoc edits, the F2F transcripts, the chat logs, the surveys, and the holistic essay scores were used to answer the research questions. Table

5 below summarizes the research questions, the data collected, and how the data has been

analyzed.

# Table 5

# Research questions, data, and analysis

Research Question	Data collected	Data analyzed
RQ1: Content of student talk during	F2F: Audio and video recording;	F2F audio transcripts: Storch (2005)
writing process and how talk compares across environments	CMC: Chat transcripts, Googledoc transcripts (in- text chat)	CMC chat logs, Googledoc transcripts (in-text chat): Storch (2005)
RQ2: How planning, collaboration, and	F2F: Audio and video transcripts; survey reports	Storch (2005), survey
development of essay	CMC: Chat transcripts, survey reports, revision history	means/themes responses, Faigley & Witte (1981)
RQ3: How products across environments compare qualitatively	Essay produced	Holistic rating from two raters
RQ4: Student	Survey responses	Means
environments and learning	Student comments	Emic theme coding

# CHAPTER FOUR RESULTS AND ANALYSIS

Data were collected over an eight-week period in which students received training and then participated in four collaboratively written essays using Googledocs in two environments: face-to-face and computer-mediated. The data collected included Googledoc revision logs, transcripts of student conversation, chat logs, final essays produced, and student surveys. All of these data were examined in order to gain insight into how students utilized Googledocs as a collaborative writing tool. After giving an overview of student comments towards the tool (the survey), I will turn to an in-depth analysis of the case-study participants.

# **Results:** Surveys

It is with the first research question that I begin the analysis because it offers the broadest look at student perceptions of the two task environments. The questionnaire was administered to all students directly following each writing task to investigate how they felt about that task in terms of their collaborative efforts, response to the environment, and their perception of learning. The questionnaire began with a self- and partnerassessment and was followed by nine questions scaled with 5-point Likert response ratings and several open-ended responses.

# Perception of Collaboration

*Likert responses.* Regardless of the task-environment, in a self-assessment responding to the question, "I believe that my group participation grade for today is 1.0 / 2.0 / 3.0 / 4.0 (circle one), where 1.0 = needs lots of improvement; 2.0 = needs some improvement; 3.0 = good enough to get a good grade; 4.0 = excellent" (Refer to Appendix B again for a sample survey), students generally felt that they participated "3.0

= well enough to get a good grade". Mean answers for these self-ratings across all four tasks can be found in Table 6 below. Students tended to rate their partner's participation above their own and this average was also above a 3.0 across all tasks and environments.

Although the tasks were designed as text-responsible (Leki & Carson, 1997) and debatable (Dale, 1994) in order to force students to engage in a communicative activity with substantial interaction, only a few students reported having to discuss with their partners to reach agreement on what they would write about. In fact, mean scores for students in the F2F context in response to question 1, "It was difficult because my partner and I couldn't agree" (where 1= strongly disagree; 2= somewhat disagree; 3= neutral; 4= somewhat agree; 5= strongly agree) were nearly neutral in task 1 (M = 2.93) and decreased to more strongly disagreeing for task 2 (M = 2.0) and task 3 (M= 2.14). Similar responses were reported by the CMC group, but even less conflict was reported here for the tasks: task 1 (M = 2.5), task 2 (M = 1.82), and task 4 (M = 1.95). An independent t-test suggested that the differences between the mean scores for the 2 environments were not significant for either the self- or peer-assessment (p= 0.33 and p= 0.31, respectively); neither were they significant for question 1 (p= 0.25). See Table 6 for a summary of the means, standard deviations, and p-values.

*Open-ended responses.* The open-ended questions eliciting specific reactions to the collaborative tasks demonstrated a variety of student reactions. Some student responses echoed their Likert responses as in the following, "We had a lot of same ideas for the article, it was easy to agree with eachother" (LA, F2F, task 1). However, unlike the Likert responses, many open-ended responses revealed that student pairs experienced

Table 6

	Environment	
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			F2F				D	MC			
	Task 1 F2F	Task 2 F2F	Task 3 F2F	М	SD	Task 1 CMC	Task 2 CMC	Task 4 CMC	Σ	SD	P-value
Collaboration											
Self-assessment	3.43	3.00	3.33	3.25	0.23	3.17	3.18	*	3.17	0.01	0.33
Partner-assessment	3.71	3.00	3.52	3.41	0.37	3.50	3.64	*	3.57	0.10	0.31
Q1: It was difficult											
because my partner	2.93	2.00	2.14	2.36	0.50	2.50	1.82	1.95	2.09	0.36	0.25
and I couldn't agree											
Response to environment											
Q2: I loved this activity	3.07	2.67	3.24	2.99	0.29	2.33	2.82	2.81	2.65	0.28	0.11
Q3: I thought this		<i></i>	2 00	1 0 L	070	, 0, C	2 10	70 C	70 C	010	
assignment was fun	47.C	CC.7	00.0	10.7	0.49	<b>C0.</b> 7	01.0	7.00	7.70	0.19	0.40
Q5: I liked sitting next											
to my partner and	3.86	3.67	3.62	3.71	0.13	NA	NA	NA	NA	NA	
working											
Q6: I would like to do											
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assignments like this	10.7	CC.7	7./1	00.7	0.2.0	7.00	C1.7	7.10	00.7	0.4.0	0.41
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	110										

**\*\*** Questions asked in open-ended format

Table 6 (cont'd).											
		F2F					F2F				
	Task 1 F2F	Task 2 F2F	Task 3 F2F	Σ	US	Task 1 CMC	Task 2 CMC	Task 4 CMC	Σ	CIS	P- value
Q7: I had a hard time											
because we had to											
use a computer. I	2.14	2.33	7.02	2.31	0.24	7.07	2.64	2.33	<b>CC.</b> 2	0.18	0.18
would have done a											
better job if it were											
hand-written											
Q9: I liked using											
Googledocs to	3.07	3.00	3.29	3.12	0.15	2.50	2.64	3.10	2.74	0.31	0.07
compose my essay											
Perception of Learning											
Q4: I think writing with						Ĩ					
another person in this	3 71	3 50	376	366	0 14	217	3 00	3 3 2	2 71	0.15	0.01*
manner is good	1	00.0			-1-0	11.0			17.0	C1.0	10.0
language practice											
Q8: I feel like I learned	3 71	1 33	3 67	3 57	100	3 50	3 18	2 4 2	722	017	0 13
something today					17:0	2	01.0				C1.0
*Significant Values p<.01											

different opinions and/or difficulty arriving at a consensus with their partners. For example, "Sometimes, we have different opinion. Because everyone has own definition of love" (JO, CMC, task 1). Others mentioned that the source of conflict was not just reconciling both opinions but also combining different writing skills and styles, "We disagreed with each other at first. Although we have the same opinion about the movie, we have different writing skills and methods that maked us lose a lot of time. So it is a little bit hard for us to write the essay" (KI, F2F, task 3).

Over half of the students stated that, while collaborative writing might be more difficult than writing alone, it could offer them some additional benefits. These reported benefits included generating and sharing ideas, checking work, and dividing work to be more efficient.

Several additional themes emerged among the responses: division of labor; discussion adding to the ease of group work and/or arguments detracting from the group work; and ability or inability to write a clear and cohesive essay. Although most groups noted that they were discussing the texts and their opinions, over half of the groups reported dividing the tasks to some degree instead of working together through the duration of the task. Surprisingly, this division of labor seemed to be a common theme across tasks, regardless of environment. For example, one organized delegation of tasks came from a F2F group in task 3, "Today we have 3 partner together create one article. First, one person type an idea, and others discuss next controlling idea. Then we all check the cohesion, grammar, connection problem" (LA, F2F, task 3). It is important to note that, while certainly not a majority, a few F2F and CMC groups reported collaborating throughout the task. YU in F2F task 1 wrote, "I wanted to do this work
109 my he ef ea Rı en W SI sli tas 2.8 = es F. in Va cl m en reg together, so I tried to talk equally and type evenly. Also, I talked about my opinion and my experience and we could agree with each other. I thought [my partner] tried to tell her opinion actively and ask my opinion, so we could discuss about our opinion efficiently." From a CMC environment, 1 student reported that, "We wrote it together each part.... We have lots of chat, So just exchange our idea" (JO, CMC, task 4). *Response to Environment* 

*Likert responses.* Students tended to have a fairly neutral reaction to the writing environment. In response to question 2, "I loved this activity," students' mean answers were slightly less than neutral for both F2F (M = 2.99, SD = 0.29) and CMC (M = 2.65, SD = 0.28) environments with CMC being the more negative of the two. Of note were slight increases in interest in the third task, when the whole class completed the writing task F2F (M = 3.24) and the fourth task, when the whole class participated by CMC (M = 2.81). An independent t-test revealed that these differences were not significant (p-value = 0.11). See Table 6 above for a summary of the findings.

Student ratings in answer to question 9, "I liked using Googledocs to compose my essay" consistently increased across the four tasks with mean ranges from 3.07 to 3.29 for F2F (M = 3.12, SD = 0.15) and 2.5 to 3.1 for CMC (M = 2.74, SD = 0.31). An independent t-test revealed that responses to question 9 were approaching significance (p-value = 0.07). When asked if they would like to do more assignments like this one in class (question 6), students ranged from strongly agreeing to strongly disagreeing. The mean response showed a steady but small increase across the four tasks for both environments (M = 2.64 - 2.71, SD= 0.2 and M = 2 - 2.76, SD= 0.43 for F2F and CMC, respectively) but were not significant (p = 0.41).

*Perception of Learning.* When students were asked to respond to the statement "I think writing with another person in this manner is good language practice" in question 4, most students fell between being neutral (3) and somewhat agreeing (4). Overall, students seemed slightly to favor the F2F environment (M=3.66, SD=0.14) over CMC (M=3.37, SD=0.15). Both environments experienced a dip in the second task and a rise by the next task in that environment (i.e., task 3 for F2F and task 4 for CMC). An independent t-test indicated that this variation was significant (p=0.01) and Cohen's d showed a very large effect size (d=3.77). These fluctuations could be a result of students' rising familiarity and comfort with the tools. Similar dips and rises can be noted in response to "I feel like I learned something today" but these did not result in any significance. This could have occurred because the average student reported somewhat agreeing that he/she learned, regardless of the task environment. See Table 6 above.

#### Case-Studies

Because the purpose of this study is to better understand Googledocs in terms of how it might function as a CSCL in an ESL classroom, I have zeroed in on how two students used the tool during the collaborative writing process. This case-study approach offers significant insight into the implications of using Googledocs as a collaborative language learning tool.

### Participant EU

*Perception of task.* EU's responses underscore some of the general comments made by the class. With the exception of the third task, she reported dividing the task with her partner, being responsible for writing parts like the introduction and/or the conclusion. She admitted, "I had some difficulty because I'm not good at typing. So it

tooks much time." She also mentioned that she "felt confusing" and uncomfortable because "We should type and shouldn't talk. So, it took much time." After her first essay experience, she wrote that she would like to work collaboratively again, "but I don't want to do with computer. It is uncomfortable. I think it is better to communicate face to face." By essay 3, however, her opinions about collaboration in general were changed,

It [writing F2F] is easier than writing by chatting but yet it is hard to write one essay with partner. Because, of course, we have different ideas. Of course we can learn something and improve our writing still by negotiating, but negotiating is hard because we are not good at English.(EU, essay 3 F2F)

After the final essay, in CMC, she explained that the Googledoc made it confusing "because we don't know what others write. I will use it [Googledocs] when I am far away from each other but I won't use at the same time."

*Content of student-talk.* As seen in Table 7 below, the distribution of the content of student talk was not the same across all 4 tasks for all areas of student-talk. EU and her CMC partners tended to spend most of their talk clarifying and managing the task such that the pair could part ways with a clear idea of the directions and what each individual was going to do to accomplish the writing task. The second most significant topic of conversation (M=25.06, SD=1.77) was the generation of ideas. When in a F2F environment, EU and her partners had a more diverse conversation. These groups spent some time, albeit brief, talking about grammar and managing the task in addition to generating ideas and organizing the task. A review of the transcripts indicates that managing the task in the F2F environment was usually limited to who would type the

essay or take notes during the brainstorming. In comparison with the CMC environment, EU and her partners spent relatively little time explicitly managing or clarifying the task.

	EU CMC 1	EU CMC 4			EU F2F 2	EU F2F 3		
	% Total	% Total	Μ	SD	% Total	% Total	Μ	SD
Generating Ideas	23.81	26.32	25.06	1.77	66.08	48.92	57.50	12.13
LREs	0.00	0.00	0.00	0.00	12.94	19.37	16.16	4.55
Organization	0.00	1.75	0.88	1.24	11.19	18.59	14.89	5.23
Reading	0.00	0.00	0.00	0.00	5.24	8.02	6.63	1.97
Task Management	52.17	56.36	54.27	2.96	4.20	5.09	4.65	0.63
Task Clarification	26.09	14.55	20.32	8.16	0.35	0.00	0.18	0.25

EU Distribution of Student Talk Content

Table 7

Effect of planning, collaboration, and peer revision on essay. In essay 1, EU and

her partner began their chat session with an attempt to generate ideas. It soon became

clear, however, that there was some confusion about what the pair ought to do during the

task. The pair then spent six minutes discussing the task (i.e., clarifying what was

required in the task and who would tackle each part of that requirement). Excerpt 1

below is taken from the Gmail chat transcript where EU chats with her partner, AL.

Excerpt 1

EU & AL Gmail Text Chat Transcript from EU CMC Essay 1

AL: if we have to compare we can just state the thesis of 2 novels or we dont have to compare just state the thesis and the main idea EU: I think we should compare AL: but it didnt say in the intruduction [instructions?] AL: we just need to compare to our own beliefs AL: do u want to do the body or u want me to do it EU: do the body? AL: introduction, body and conclusion EU: you mean, what I want to do? AL: yeas EU: I don't careeeeee It is so confusingge t t AL: ok, i will do the body, can you write intro and conclusion? AL: yeah, we do some free writing then we can start write so our intr, body and conclusion should be about " love is free" EU: but I am so confusing we have to show the authors' thought and compare it with our thought? AL: where did it say?on the paper? EU: yeah AL: where? EU: your sheet Describe how the author portrays~ and then compare/contrast it to your own beliefes AL: i will do that part EU: Ah I understand AL: once u finished intro and conclusion, YOU can give me some ideas about it and i will write it i mean you can give me ideas about the 2 story which you think are important than i can add it into pur paper

After agreeing that their thesis would be "love is free," the pair said they would freewrite individually on their respective papers. However, after a mere three minutes, AL asks EU if she can see her writing in the Googledoc. Seven minutes later, EU responds "yeaa." Although the original plan was for EU to share her ideas with AL, there is no exchange of these ideas over chat nor is there chatting within the Googledoc itself. In fact, there is no explicit communication between the partners until AL types that she is done writing her section forty-seven minutes after the two begin writing. With twenty minutes remaining, AL announces that she will go back and edit EU's part for grammar errors and that EU should do the same to which EU responds, "yes I will. And you can delete or add to my part." A review of the Googledoc revision history shows that they made a few additional changes above the surface-level edits to which they agreed. Table 10 on the next page provides an overview of the revisions conducted collaboratively following the adapted version of Faigley and Witte (1981).

Peer Revision & Edits EU CMC Essay I						
	EL	ſ	IA	_	Pair To	tal
	Instances	Words	Instances	Words	Instances	Words
Surface Changes						
Spelling	0	0	1	1	1	1
Tense, number, modality	0	0	1	1	1	1
Punctuation	0	0	7	0	2	0
Format	0	0	1	1	1	-
Total	0	0	5	ŝ	5	e
Meaning-Preserving Changes						
Additions	0	0	12	12	12	12
Deletions	0	0	0	0	0	0
Substitutions	0	0	ŝ	5	ŝ	5
Permutations	0	0	0	0	0	0
Distributions	0	0	0	0	0	0
Consolidations	0	0	0	0	0	0
Total	0	0	15	17	15	17
Text-based Changes						
Additions	7	101	1	24	8	125
Deletions	0	0	0	0	0	0
Substitutions	0	0	1	14	1	14
Permutations	0	0	<b>.</b> 5	77	5	77
Distributions	0	0	0	0	0	0
Consolidations	0	0	0	0	0	0
Total	7	101	7	115	14	216

Clearly, AL is doing most of the revisions. After ten minutes of reviewing the other's work and five minutes before time is called, AL states "I changed some words [...] we are done."

In essay 4, EU and her partner displayed a few differences from that of the prior essay. This pair began with some task management before generating ideas. This generation of ideas included a mutual sharing of information as the two tried to decide which topic they could write about, without it being too difficult for them. After deciding on a topic, the two originally divide the task by introduction/conclusion and body paragraphs as they did in previous writing tasks but then decide that it would be better to have one person compare and the other contrast. The chat also indicates that the two did not spend time brainstorming separately but rather together until they had a thesis both were comfortable writing about. Then, they began writing and wrote individually for forty-one minutes.

If essay 1 had little collaborative revision between the partners EU and AL, essay 4 had even less. In this task, EU's partner, FE, asked EU for help in revising the essay. He wrote, "help me to check it." EU, however, was done with the assignment when she finished writing and responded, "it s ok. let's finish. haha." It should not be surprising, then, that the pair shared only two revisions, and these were revisions in the format of the document. That is, fairly early on FE moved the paragraphs around so that there were some extra spaces between the text blocks and each could write his/her separate paragraph without crowding the text block of his/her partner.

These behaviors are in stark contrast to what can be observed from the audio transcripts of EU's F2F essays. In essay 2, both students began the task by participating

in a quality exchange while generating ideas. But, EU's partner, SE, took charge early on by self-electing to take notes during the brainstorming. She then assumed the role of typing when EU asked SE, "Can you do the typing?" Immediately following this request, EU begins to narrate aloud some ideas for what SE should write, and SE reformulates EU's words while typing them into the Googledoc. These transcripts and reformulations are shown in Excerpt 2 below.

# Excerpt 2

EU & SE Oral Transcripts from EU F2F E	issay 2
Oral transcripts	Googledocs
EU: two storiesand the Beautiful White	
Horsethe authors	
SE: How can IHow can I start?	In the two stories, "The Lottery" and "The
SE: First, the authorthe authors say that	Summer of the Beautiful White Horse", the
morality	authors talk about the morality of the
EU: to follow tradition	villagers from the traditions. The two
SE: traditions of the	authors show the different morality and
EU: [Korean]	traditions that one side is wrong and another
	side is right. The morality does depend on
SE: They can	the each of the tradition from the two stories.
SE:What can I write?	In "the Lottery", Jackson
EU: Stories show thatuhshow that	
morality and tradition	
[EU narrates and S types]	
[SE continues typing w/o EU narrating]	
S: Who is the author of "The Lottery"?	
E: Jackson	
S: Jackson?	

It is worth noting that towards the end of the excerpt, SE is beginning to assume control of the writing task. She begins composing and typing, only consulting EU when she needs information about the stories (e.g. the author's name). Despite SE's decision to do most of the writing, EU remains engaged by reading what SE writes, offering periodic corrections. Excerpt 3 below continues the conversation from Excerpt 2 above,

illustrating this shift in control.

# Excerpt 3

EU & SE Oral Transcript from EU F2F Essay 2

SE: What do you think? Jackson defines the morality as...as...um? EU: She defines the morality as SE: What is morality of this story and this story? This story is honesty. EU: Honesty. Maybe I remember too. Jackson thinks the [SE sighs and deletes] SE: Jackson SE: The morality is [deletes] depends on EU: and in the Lottery people become have question about the old tradition and then SE: Before this sentence we need [SE re-reads] SE: Ahhh! [Korean] Ah! SE: [types and narrates] and other side is right [types but no narration] SE: depend on the tradition. On the each of the tradition [types but no narration] SE: In the Lottery, Jackson, Jackson shows that the village's tradition...um... was [deletes] as them [deletes] some view? is... EU: pick, pick? SE: Eh? pick EU: c, c,

Interestingly, both the audio recording and the survey make it clear that SE not only did most of the work, but that she became increasingly more frustrated with EU for not contributing to the assignment.

In contrast to the above experience in essay 2, essay 3 involved a more

collaborative work. Both worked together to compose their essay, beginning with

generating ideas and deciding on their essay's structure. When they began to write, they

traded off typing with EU's partner, CH, responsible for the majority of it. Although 1

student typed, both were orally composing the essay and reformulating it before typing it

into the Googledoc. After it was typed, they often re-read aloud what they had written, a process that often resulted in LREs.

*Holistic scores.* EU and her partner's scores seemed to vary quite a bit across tasks and environments. However, her mean score for CMC was M=2.38, considerably lower than her mean score in F2F at M=3.13. Percent rater agreement was 93.75 across all 4 of EU's essays. See Table 9 below for a summary of these findings.

Table 9

СМС	EU Essay 1	EU Essay 4	М	SD
Rater 1	3	2		
Rater 2	2.5	2		
Μ	2.75	2	2.38	0.53
% Rater agree	87.5	100		
F2F	EU Essay 2	EU Essay 3	Μ	SD
Rater 1	3	3.5		
Rater 2	2.5	3.5		
Μ	2.75	3.5	3.13	0.53
% Rater agree	87.5	100		

EU Holistic Essay Scores by Environment

# Participant MC

Student perception. In contrast to EU, MC began with a F2F task. After her first collaborative experience, her responses pertained mostly to the idea of writing an essay with another person rather than to the tool, Googledocs, in particular. She wrote, "I think if I work by myself, it would be more efficient. I feel tired to explain everytime I need to edit soemthing to the essay." She also found it difficult to compose an essay with another person and explained this difficulty by writing, "Because everytime I need to stop to explain why I edit this make my thoughts stuck. I prefer to write by myself." Although

she did not report any advantage to writing the essay F2F with another person, she supposed it would be better than in a CMC environment.

Writing in a CMC environment in task 2 confirmed her earlier suspicions that it would be more difficult than F2F; however, she found that, "actually discuss on the computer is not as hard as I thought." She commented that she disliked that she and her partner were not able to write together but rather had to divide "the part for each other which is hard to combine and do the cohesion between the different paragraphs we wrote." Interestingly, she reported thinking that, "if I know what he is going to write and he know what I am going to write than our paragraph will be much easier to become a unity."

MC noted both drawbacks and advantages of writing collaboratively online. She commented on the writing experience and Googledocs tool saying that, "sometimes I did not saw his message to me immediately" and "the layout function and the spelling/gramma check function is not as good as word document". Similar to her responses on the F2F surveys for essay 2 and 3, she continued to feel that, "sometimes it is kind of a waste of time to explain if your partner disagree with you. It will make you in hurry while it is timed writing" when she was writing in a CMC context. Her reactions were not entirely negative, however. She felt strongly that, "It is good practice for time writing though it keep my heads intense" and "it is fun to convince your parnener [partner] to accept and agree to use your ideas".

*Content of student-talk.* Much like EU, MC and her partners' student talk changed by environment. In the CMC context, they spent most of their time managing the task while similar tasks in F2F found them focusing on generating ideas. In a F2F

environment, MC and her partner did engage in several language-related episodes in addition to spending a bit more time discussing how the essay would be organized than in a CMC environment. The focus of their student talk is summarized in Table 10 on the next page.

	Content
	Student Talk
	ribution of S
Table 10	<u>MC Distr</u>

	MC CMC 2	MC CMC 4			MC F2F 1	MC F2F 3		
	% Total	% Total	M	SD	% Total	% Total	Μ	SD
Generating								
Ideas	24.24	0	12.12	17.14	35.12	53.47	44.30	12.98
LREs	3.03	0	1.52	2.14	28.57	14.98	21.78	9.61
Organization	4.55	0	2.28	3.22	12.50	12.46	12.48	0.03
Reading Task	:	ł	ł	1	13.10	8.99	11.05	2.91
Management Task	38.18	62.04	50.11	16.87	5.06	8.04	6.55	2.11
Clarification	0	17.3	8.65	12.23	5.65	2.05	3.85	2.55

As is clearly visible in Table 10 above, coding of MC CMC 4 revealed surprisingly little exchanges between MC and her partner, SH. Recall that this essay was written as a homework assignment out-of-class to determine whether students would use the tool differently when they were not being monitored. A review of the conversation exchanged in Googledocs is quite telling. MC and SH began their homework by chatting in Gmail. MC initiated the conversation in Chinese to which SH reminded her that this was against the rules. SH then suggested using the Googledoc to chat because it was more efficient. Below in Excerpt 4 is a record of their Googledocs chat, made visible through the revision history.

### Excerpt 4

### MC CMC 4 Gmail Chat Transcript

Immediately following MC's response of "yes," the entire chat was deleted from the Googledoc. There were several autosaves in which no revisions were recorded and then, in the next recorded revision, the pair had already begun to compose the introduction of their essay. This finding led me to check what the other pairs were doing during their homework assignment. Of the nine remaining pairs participating in the fourth essay, only one other did not use a combination of Gmail and/or Googledocs to discuss the essay. It

appears that, at least for these students, CMC may have been an obstacle to completing the task.

While the exact percentages for MC and her partners in a F2F context differ from EU's, the general distribution is the same. That is, the focus of both MC and EU seems to have been the same across the F2F writing tasks. In both tasks, MC spent the most time generating ideas, followed by LREs, structure, reading, task clarification, and finally task management (Refer to Table 10). Of note is the extremely large variation for both environments for MC and her partners.

*Effect of planning, collaboration, and peer revising on essay.* For MC's first essay written over the internet, she and her partner, AA, chatted in Gmail about the essay for a total of 23 minutes before beginning to compose the essay. Although they were chatting for a lengthy period of time, they shared relatively few turns. This was due mostly to the fact that they were already discussing their thesis after only five turns. This exchange is transcribed below in Excerpt 5. These transcripts show that the pair is brainstorming together rather than separately, but that this brainstorming is somewhat dominated by MC.

Excerpt 5

# Transcripts of MC CMC 2

AA: but what do you think the thesis should be?
MC: What about write on the beautiful horse? I got some ideas and examples
AA: cool. now let's brainstorm and we will discuss later
MC: firstly, we need to claim how the authors opinion on it. I think the author didnot think its not good
AA: why?
MC: the tone and the name of the story shows a beautiful experience
AA: aha and we need a support and example. whaat about the thesis?
MC: I think the idea of Aram indicate the opion of the author, do u think so?
like everybody think Mourad is crazy, but Aram said he donnot think so

### Excerpt 5 (cont'd).

and you can look at the P195 the bottom of it\ the paragraph begin with "Well, itseems... I suggest here indicate the opnion of the author AA: oh yeah MC: so, in the essay, we r going to contrast our opinion, which is we think this action is regarded as stealing, do u think is good? AA: ok. I will think about good thesis now :)

After quickly establishing their thesis, the pair moved in to the Googledocs and began writing. Although MC wrote that they should move on to the document page where they could keep brainstorming and writing, once on that page, she proceeds to write the essay. At no point before beginning to write the essay did the pair divide the task. Rather, MC began writing the essay and plowed through it. Typing directly into the Googledoc, AA asked MC to share her ideas with him after she had finished the introductory paragraph so that he could help more, but MC did not respond to his request for several minutes. Finally, she indicated that he could "write some on the story" while she would "write [their] opinion on it first" and then they could both edit and combine the parts. Several times during the ninety minutes, AA made similar attempts to chat with MC, most of which were either ignored at length or entirely.

Table 11 below outlines the revisions that AA and MC made to their essay. Unlike EU and her partner, MC and AA only had one text-based change. Across the categories, however, the two pairs seem to have been remarkably similar in terms of the number of revisions (EU total = 31; MC = 41) and the way in which they were made (i.e., by one of the partners).

# Table 11

	MC		AA		Pair Total	
	Instances	Words	Instances	Words	Instances	Words
Surface Changes			<u></u>	<u> </u>		
Spelling	0	0	0	0	0	0
Tense/num/mod	0	0	0	0	0	0
Punctuation	2	0	2	0	4	0
Format	1	1	2	2	3	3
Total	3	1	4	2	7	3
Meaning-Preserving	Changes					
Additions	17	38	3	4	20	42
Deletions	7	12	1	1	8	13
Substitutions	2	2	0	0	2	2
Permutations	0	0	0	0	0	0
Distributions	0	0	0	0	0	0
Consolidations	1	1	0	0	1	1
Total	27	53	4	5	31	58
Text-based changes						
Additions	1	1	0	0	0	0
Total	1	1	0	0	1	1

Although MC and SH did not spend much time chatting, compared to EU CMC 4, they made considerable revisions and edits to their essay. These revisions did not include any text-based changes, but they did include many additions and deletions that improved the essay's coherence and unity. Table 12 found below summarizes the documented revisions.

Table 12

Peer Revision & Edits MC CMC 4

	MC		SH		Pair Total	l
	Instances	Words	Instances	Words	Instances	Words
Surface Changes						
Spelling	0	0	0	0	0	0

Table 12 (cont'd).						
Tense/num/mod	0	0	0	0	0	0
Punctuation	3	0	0	0	3	0
Format	4	0	1	0	5	0
Meaning-Preserving	Changes					
Additions	19	21	0	0	19	21
Deletions	5	6	1	1	6	7
Substitutions	2	8	0	0	2	8
Permutations	1	0	0	0	1	0
Distributions	1	0	0	0	1	0
Consolidations	2	2	0	0	2	2
Text-based changes						
Additions	0	0	0	0	0	0
Deletions	0	0	0	0	0	0
Substitutions	0	0	0	0	0	0
Permutations	0	0	0	0	0	0
Distributions	0	0	0	0	0	0
Consolidations	0	0	0	0	0	0

*Holistic score.* As seen in Table 13 below, MC received fairly consistent holistic scores across the environments. Her mean score for CMC was M=2.25 while her mean score for F2F was slightly higher at M=2.63. Total rater agreement on MC's scores was 90.6%.

# Table 13

	C	мС		
	MC Essay 2	MC Essay 4	Μ	SD
Rater 1	1.5	2.5		
Rater 2	2.5	2.5		
Μ	2	2.5	2.25	0.35
% Rater agree	75	100		
-	F	2F		
	MC Essay 1	MC Essay 3		
Rater 1	2.5	2.5		

MC Holistic Essay Scores by Environment

Table 13 (cont'd)				
Rater 2	2.5	3		
Μ	2.5	2.75	2.63	0.18
% Rater agree	100	87.5		

### Environment: CMC versus F2F

As previously discussed and as is visible in Table 14 below, the content of student talk varied for students depending on the task environment. A 2-tailed independent t-test reveals that these differences are significant. The case-study participants, on average spent more time generating ideas in a F2F environment (M= 50.9, SE= 6.39) than they did in a CMC environment (M= 18.31, SE = 6.21). This difference was significant t(6) = 3.66, p=0.011). Cohen's d = 0.38 indicates this significance has a medium effect size on the population. On average, these participants also spent more time exchanging LREs (M= 18.97, SE= 3.47) in F2F than CMC (M= 0.76, SE= .76) which was also significant t(6) = 5.13, p= 0.002 with a medium effect size (Cohen's d = 0.32). Finally, these participants tended to spend more time on average discussing organization (M= 13.69, SE= 1.66) when F2F than when collaborating online (M= 1.59, SE= 1.08) which was significant t(6) = 6.11, p= 0.001). Cohen's d for organization indicated a smaller effect size d = 0.28. On the other hand, case-study participants spent more time on average managing the time in a CMC context (M=62.04, SE=4.61) than when sitting next to their partner (M= 5.6, SE= 0.84) which was also significant t(3.199) = -12.03, p= 0.001) with a small effect size of d=0.16. While it is true that students, on average, spent more time clarifying the task in a CMC environment (M= 17.3, SE= 6.53) than in F2F (M=2.01, SE= 1.29) this difference was not significant t(3.235) = -2.298, p= 0.099.

Total Maans of Studant To	ILE UN L'UNITERTIT	sru					
Transi of Diance 1	CMC	-Total	F2F-	Total	P-value	R	Cohen's d
	Μ	SD	Μ	SD			
Generating Ideas	18.31	12.42	50.9	12.78	0.011*	0.19	0.38
LREs	0.76	1.52	18.97	6.94	0.002*	0.16	0.32
Organization	1.59	2.15	13.69	3.33	0.001*	0.14	0.28
Reading**	1	;	8.84	3.26	:	:	:
<b>Task Management</b>	62.04	9.23	5.6	1.68	0.001*	0.08	0.16
Task Clarification	17.3	13.05	2.01	2.59	0.099	0.27	0.56

\* Significant values \*\*Reading could not be measured in the CMC environment and thus is not compared

# Quality of end products

The third research question asked whether the task environment had any apparent effect on the quality of the end product. In order to answer this question two raters gave holistic grades on the eight student essays. The scores are listed in Table 15 below.

# Table 15

		Cl	МС			
	EU Essay 1	EU Essay 4	MC Essay 2	MC Essay 4		
Rater 1	3	2	1.5	2.5		
Rater 2	2.5	2	2.5	2.5		
Μ	2.75	2	2	2.5		
% Rater agree	87.5	100	75	100		
	F2F					
	EU Essay 2	EU Essay 3	MC Essay 1	MC Essay 3		
Rater 1	3	3.5	2.5	2.5		
Rater 2	2.5	3.5	2.5	3		
Μ	2.75	3.5	2.5	2.75		
% Rater agree	87.5	100	100	87.5		
-	Total % rater					
		agree 92.2				

Holistic Ratings and	l Percent H	Rater A	lgreement
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These essays were graded based on the holistic rubric developed by the teacher. The grades are reported on a 4.0 scale (with 2.5 being a passing grade). Percent rater agreement was determined by dividing the 4.0 scale on the grade intervals of 0.5. This interval was chosen because it was the standard grade interval used in the class and the language center for reporting of all grades. Dividing 100% (total agreement possible) by the possible intervals (eight) resulted in a 12.5% agreement for each 0.5 grade interval. In other words, raters both giving a 3.0 score would have 100% agreement whereas two ratings of 2.5 and 3.0 would only have a percent agreement of 87.5%. A calculation of

mean rater agreement for all 8 essays revealed a high rater agreement of 92.2% (Refer to Table 15 above).

Raw scores (Table 15 above) indicated that while MC's performance across tasks remained fairly consistent, EU's performance did not remain as stable. This could be because of the great variance in collaboration with each of the partners. Both raters agreed that the essay produced by EU and her partner in task 3 was of a higher quality than any of her other 3 essays. Table 16 below shows the mean essay scores by environment. An independent t-test revealed that, on average, EU and MC received higher holistic ratings in a F2F environment (M = 2.87, SE = 0.22) than in a CMC environment (M = 2.31, SE = 0.19). This difference, however, was not significant t(6) =1.96, p = 0.097.

# Table 16

Mean Ho	listic	Scores	bv	Environment
---------	--------	--------	----	-------------

	М	SD	P-value	Cohen's d
CMC	2.31	0.38	0.097	1.6
F2F	2.87	0.43		

### Summary

In summary, survey responses indicated that students were generally neutral to the task and the environment. Students noted some benefits as well as challenges to both the collaborative writing task itself and the use of the new tool, Googledocs. Content of the case-studies' student talk varied by context, although it seems that there was variation across pairs as to how, exactly, the conversations were framed. Similarly, these pairs varied in how they decided to work together, whether attempting to participate in a collaborative or cooperative effort. In the CMC environment, cooperation seemed to be

the norm for the case-study participants; in the F2F environment, the type of collaboration varied depending on the individuals in the group. Overall, it appears that case-study participants in the F2F environment tended to spend more time revising each other's ideas and sentences, in the form of oral reformulations. Students in the CMC environment made fewer changes to their partner's section of the essay with some groups choosing to make virtually no edits at all and other groups displaying unequal editing behaviors between partners. Although differences in holistic grades were noticed in the data subset (indicating some environmental effects on the overall quality of the essay in favor of a F2F context), no significant differences were found.

### CHAPTER FIVE CONCLUSION, IMPLICATIONS, & FUTURE RESEARCH

In the attempt to tease out the transferability of Googledocs as a CSCL, the present study addressed four research questions investigating the writing processes of students using the word processing interface in two different task environments, face-to-face and synchronous computer-mediated communication. This investigation included an overview of all participants' perceptions of the tasks and an in-depth look at the nature of two case-study participants' collaboration and how that collaboration functioned within both task environments. It also examined the quality of the final products created. This study's findings shed some light on the potential application of a hitherto unexamined internet communication tool (ICT) as a computer supported collaborative learning (CSCL) tool for the second and/or foreign language classroom.

### Transferability of Googledocs as a CSCL

In accordance with the interactionist vein of SLA, a successful computersupported collaborative learning tool would ideally facilitate collaborative interaction, either in the form of providing opportunities for input, output, and language negotiation (cognitive interactionism) or for scaffolding (sociocultural interactionism). If not facilitating these, a CSCL ought to, at the very least, make such interactions possible. The four current research questions attempt to tap into the interactions facilitated and/or made possible with Googledocs.

### CMC Googledocs: A Truly Collaborative Tool?

Although attempts were made to promote negotiation with closed-ended tasks (Blake, 2000; Pellettieri, 2000) and discussion with "text-responsible" prompts (Leki & Carson, 1997), there was little evidence to support the contention that students engaged in

significant or meaningful interaction in the CMC environment as compared to the F2F environment. In fact, mean responses from the survey indicated that students noted *less* conflict on average while interacting in the CMC tasks (M= 2.09, SE= 0.21) than in the F2F (M= 2.36, SE= 0.29) although neither environment reported an overly disruptive conflict. Previous literature would therefore imply that none of these students were engaged in significant negotiations over the text. However, the student's open-ended questions might point to quite the opposite. The majority of the students noted some level of discussion of the topics, whether the source of the discussion being from a point of agreement or disagreement. What weight should be lent these answers remains questionable since students were well aware that they were being graded on their level of participation in the activities. Whether or not the students were interacting with each other by scrolling up and down and re-reading their partner's composition cannot be known because of the lack of screen captures and eye-tracker information.

In terms of the content of student talk, the actions of the F2F student pairs were congruent with previous research. Although the precise percentage of time spent on generating ideas differed across student pairs, this category accounted for the largest total time for each pair. The average time spent on generating ideas across the four F2F essays was 50.8%, remarkably similar to the 53% Storch (2005) noted. The second largest category, language related episodes, was also in-line with previous studies (Storch, 2005; Cummings, 1989 as referenced in Storch, 2005).

Irrespective of student-reports, chat transcripts and Googledocs revisions of the case-study participants (if assumed to be somewhat representative of the rest of the class) tentatively suggest that there was minimal interaction between students in the CMC

environment as opposed to the F2F. With a few noted exceptions (e.g. the pairs in task 4 that chatted to exchange ideas throughout the writing process), student interaction tended to be reserved for the beginning and the end of the writing task and then, when it occurred, did not offer much in the way of language negotiation (LREs) or scaffolding as visible through Table 9 and Table 12 detailing the content of student talk in the CMC environments. Unlike the F2F groups, these student pairs spent most of their chatting time in dividing the task. That is, they quickly established their thesis without fleshing out how it would be developed and supported before delegating tasks and beginning to write; they merely began writing with a backbone of the task in mind. The development and support for the delegated parts were left up to the individual student. While certainly more frequent in the CMC setting, it is necessary to note that several F2F pairs also spent time brainstorming and/or writing independently.

Student surveys report that one difficult aspect of the CMC environment was that it required them to explain themselves, certainly not an easy task. Both EU and MC reported difficulties in negotiating their thoughts regardless of the task environment, though they certainly noted that the "lean" medium (Smith, et. al, 2003, p. 706) afforded by the CMC world was the more difficult of the two. The students' accounts that the CMC environments were more difficult may indicate that there is a greater potential for learning precisely because it forced the students to negotiate without the aid of nonverbal cues like gestures. EU noted her lack of typing skills as a source of frustration, while MC considered writing with another person her major source of frustration. MC reported thinking it was boring, inefficient, and difficult to write with another person. Oddly enough, neither student's claim of significant negotiation can be corroborated in

the chat transcripts. In fact, there was relatively little negotiation of the text or the individual writer's opinion. This lack of engagement in discussing the meaning and their interpretation of the text can be contrasted with the discussions that students engaged in during the F2F tasks. But, even if there had been substantial communication, there is no indication that these students would have appreciated the task any more.

It seems that, for the CMC environment at least, merely making text-responsible writing prompts will not suffice to ensure that students will take advantage of the opportunity to interact with each other to discuss the text (as indicated by Leki & Carson, 1997). This is not to say that such negotiations are impossible; certainly they are quite possible with the chatting technology currently available. However, mere availability does not imply that students will take advantage of the situation, especially when the task has a pre-determined endpoint that may foster impatience with the task and the benefits it may offer. Kessler and Bikowski (2010) have remarked that,

collaboration leads to a sense of ownership that encourages extensive utilization of the learning space. . . students begin to use the space in ways that are meaningful to them but unanticipated by instructors or designers. Of course, some students may not immediately recognize the potential of these spaces and the interaction that they offer. (p. 55)

This seems to be precisely the case, especially when noting student comments that writing online was "uncomfortable" (EU CMC essay 1) or difficult because he/she had to explain his/her thoughts rather than being able to express them non-verbally in a F2F pair. Psychologically, we all seem resistant to those very things that will improve us.

Both SE and EU think that the chatting online is more difficult because they are forced to articulate their ideas, yet they both seem to experience similar difficulty when they enter the F2F environment. Furthermore, what they identify as being most difficult about writing with another person is exactly what the research has shown to be beneficial to students. That is, the more opportunities students have to interact in meaningful ways, the better it is for their language development. What has been considered meaningful is an interaction that requires more than a few word response (Swain & Lapkin, 1998) such as text-responsible discussions where students are prompted to discuss and defend their interpretations of an authentic text (Leki & Carson, 1997) or topics that instigate conflict and thus the defense of one's opinions (Dale, 1994). Perhaps students would have been more amenable to the new environment had they felt like it were more similar to F2F meetings (i.e., seemingly more natural to them). For example, if the students had been using the voice and/or video chat features now available on Gmail instead of the thin medium of the text-only chat.

This is not to say that there was no collaborative writing. Towards the end of the assigned time, most pairs engaged in peer-revising and editing. This stage usually involved some surface-level changes, and review of the finished product revealed many morphosyntactic errors that went unaddressed. Previous literature supports this lack of attention to form of students in a CMC environment (Arnold, Ducate, & Kost, 2009; Kessler, 2009). It remains to be seen whether most of the students reacted as AL (EU's partner in CMC essay 1) and SH (MC's partner in CMC essay 4) who both indicated noticing sections of their partner's writing riddled with morphosyntactic errors and/or unclear ideas. AL stated that the point when "you tried to look at the other part of the

essay which is write by your partner, there are lots of grammar errors and some sentences doesn't make sense" was "the most difficult part" of the collaborative task.

What is interesting here is that neither AL nor SH followed up their confusion with a negotiation, either in the chat window or the Googledoc. While it is not particularly surprising that students did not report experiencing any of the benefits of saving face or reduced affective factors normally associated with an anonymous CMC technology, it is surprising that students did not resolve their confusion for the sake of their grade. Of course, the lack of resolving conflict is not unheard of in the CALL world. The text-medium and the ability to scroll up and down might make a verbalized resolution unnecessary (e.g., Smith, 2008). One would imagine that students, conscious of the fact that they would be graded on the intelligibility of their partner's work, would be motivated to produce the clearest essay possible. Such lack of negotiation suggests a lack of co-ownership of the essay. Arnold, Ducate, and Kost (2009) similarly found that students working collaboratively on a wiki did not exhibit a sense of co-ownership of the wiki pages because they never engaged in deletions to another's work.

Student questionnaire responses raise other possible reasons for this lack of revision to a peer's work. One student reported the desire to stop and help her partner get back on track, but this would have been an interruption. She wrote, "I wish then I cannot writing myself and meantime know what my partner's writing, so that I can't immediately tell my partner like 'this sentences are not good, or did not support very well,' but if I do it, I feel will interrupt my mind to write" (KA, CMC essay 1). So, we return to the idea of efficiency. Pausing during the writing process to comment on a peer's work is inefficient because it disrupts the creative flow; and, in a timed, graded situation, this is

less than ideal. In this sense the CMC environment, specifically because it makes it possible to ignore a partner, may be better suited to getting out a draft of an essay. Such was the case for several students who wrote that the CMC environment mitigated the effects of the interruptions because it allowed them to ignore the chatting of their partner (a fact they thought to be negative, however). "Sometime I did not saw his message to me immediately" (MC, CMC essay 2).

It should be noted, however, that the Googledoc revisions attest to the fact that usually at least 1 student in each pair took responsibility for attending to revisions in both sections of the essay. Although these revisions included some morphosytactic corrections, when made, most of these revisions were meaning-preserving additions and substitutions that added to the piece's overall cohesion. The case-study pairs' revision behaviors supported previous findings on the revision behaviors of wikis (Arnold, Ducate, & Kost, 2009; Mak & Coniam, 2008). Of the case-study pairs, only 2 surveys failed to mention some concern about connecting the two parts of the essay. Many of the students noted that this was one of the more difficult aspects of the collaborative task, especially in the CMC environment where the two sections might have drifted away from the agreed upon thesis.

Although these revision behaviors were certainly less frequent than was hoped for, their presence during the writing process may still be promising. Recall that Dale (1994) claimed that viewing another person's cognitive processes unfold was helpful in furthering a students' own cognitive abilities and that Googledocs, as a synchronous tool, allows students to view their peer's writing evolve in real time. In this light, whether or not a revision was to a student's own work or to the work of his/her peer, the possibility

that his/her peer could *witness* these changes still exists. That is, by watching Googledocs, one peer is privvy to the cognitive processes of his/her peer. Unfortunately, from the current data, only a few students reported noticing the skills of their partners. AA (MC's partner in CMC essay 2) wrote, "My partner's writing is very impressive and I liked the way she writes and she is fast and have a great ideas and supports." MC wrote that with Googledocs "it will be easier if my partner can see every time I edit and tell me his idea immediately." Several student comments about the difficulty to see the partner's edits and/or chats throws into doubt whether students were able to notice and/or actually did notice their peer's writing iterations.

While pinpointing the precise source of the relative lack of interaction from the current data is a fairly impossible task, there are several possible explanations for this phenomenon. The first lies in how students tend to task themselves during writing sessions. It almost goes without saying that because the context was a timed and graded writing assignment, students would attempt to find the most expeditious way to complete the required task while exerting the least possible effort. Previous research conducted by Kessler and Bikowski (2010) perfectly illustrates this fact. In a semester-long wiki study, student participation fell into several categories, the largest of which accounted for a slight majority of students: these students "engaged marginally" in the activity (p. 46). Only a very few students engaged beyond the assignment's minimal requirements.

This operational axiom was most likely compounded by the nature of the medium and the task themselves; the question then becomes to what extent is this true? Recall that Googledocs is an interface that allows for a division of labor because it is, by nature, a synchronous collaborative tool. It would make little sense, then, to use a tool built

specifically to increase efficiency in the inefficient manner of working together through each stage of the writing process. Previous research on wikis reflects this perspective on the medium as efficient (Arnold, Ducate, & Kost, 2009). Storch's (2005) research on F2F collaborative writing reported similar student perceptions of a collaborative writing task as being more efficient than working alone.

Similarly, the results could be a result of how students task themselves in a timedwriting situation. The case-study participants and their partners mentioned time on a number of occasions, a fact that speaks to effect time might have had. These comments ranged from gentle reminders of the time to demands that their peers hurry up. The timeconsciousness (or even anxiety) probably prompted students to be as efficient as possible in order to get the assignment done. Time, in combination with the fact that students generally perceived the CMC task to be more difficult, could have created a significant cognitive and affective load for the students.

It is interesting that students generally interacted in this manner. It seems that students were able to envision just one possible way to accomplish the writing task. Perhaps this is an artifact of the medium in the sense that division of labor is possible in a CMC environment, but not so much in a F2F one. However, student responses from surveys indicated that students in a F2F environment also ended up dividing some of the tasks, such as brainstorming and editing. Another explanation could be what Arnold, Ducate, and Kost (2009) found in a collaborative wiki project: that students did not display qualities of equal ownership of the collaborative document (i.e., once students wrote part of the wiki, other students left it alone). These behaviors often resulted in repetitive sections, rather than co-owned consolidated topics. Student responses in the

current study lend merit to this possibility. Several students mentioned noticing errors or non-unified parts of their partner's section, but they chose to leave these parts alone.

Another probable cause for the division of labor and lack of collaboration was the context of the assignment. The class was well-practiced in discussing literature in literature circles. This type of student-led discussion requires that each student be responsible for a certain aspect of the discussion whether that be content or lexical. Thus, students might very well have thought that this was the type of collaboration that was expected of them.

The effect of focusing on the division of task in conjunction with the lack of cogenerating of ideas meant that essays were less cohesive and unified than in the F2F environment, although it is promising that students report noticing this deficiency in their own writing. In this sense, CMC environment might be beneficial as it might have helped students to conceptualize what, exactly, an essay lacking unity would look like. Thus, by participating intimately in the writing process with another person, students were able to step outside of their own writing in order to visualize the need for unity--a concept not easily grasped by many L2 learners. Kessler and Bikowski (2010) have echoed a similar lack of synthesis and cohesion in student-led collaborative writing. *Pedagogical Implications of Googledocs* 

The nature of the interactions in this CMC context raises a unique set of opportunities and challenges that educators ought to ponder when considering implementing Googledocs in the classroom. Though tentative at best, these data suggest an underwhelming response to the tool. Perhaps student reactions were lukewarm because the writing assignments were graded requirements for the course. As often
seems the case, grades tend to make otherwise new and interesting activities seem like drudgery. Or, perhaps the tool did not feel at all new or exciting simply because it so closely resembled Microsoft Word. Thus, students who did not buy into my claim that chatting online to compose an essay was fun or, at the very least, helpful for promoting language development, did not even have the novelty of a new tool to excite them. This is in stark contrast with a slew of CMC research where students are often engaging in ways that do feel novel, and therefore, exciting to them (e.g., wikis in Arnold et al., 2009). Additionally, unlike many authentic uses of CMC tools like blogs and wiki, learners in this study were not writing for a real audience. This is, perhaps, an inauthentic use of the tool which could explain why students did not seemed enthused about its incorporation into the course's syllabus.

More than being uninteresting, MC's survey responses provide further explanation that some students might have been viewed Googledocs as an inferior tool. MC mentioned that some of the word processing abilities, namely, the spell and grammar check, and the formatting of the deceptively large text block were not as accurate or easy to use as Microsoft Word. While she expressed some frustration at this, she also mentioned that it was a good test for her abilities because the crutches she normally relied on, were not as refined in Googledocs. Other students, however, were not so amenable to being forced to relinquish their much-loved scaffolds. SE (EU's partner, CMC essay 2), for example, complained that the writing task was impossible because she couldn't use a dictionary. Furthermore, some students were resistant to the perceived difficulty of the task. Because the current data indicate that students are resistant to such work, regardless

of the task environment, language instructors need to make it clear to students that, though difficult, it is precisely the struggle that will further their language development.

Language instructors may also find themselves wondering what benefits lay in the integration of Googledocs, since little evidence has been given to support claims that it promotes substantial peer interaction. As previously stated, some students might be attuned to the actions of their partner and may, thus, learn simply by observing what linguistic moves a more skilled learner makes when revising the essay. Additionally, analysis showed that CMC pairs allotted more than half of the student talk-time to task management (M= 62.04%). Excerpts examined above indicate that pairs engaged in extensive task management before dividing the tasks of writing the essay. While may not offer learners any ostensible benefits, significant task clarification in the form of text may have been partly responsible for the longer texts produced by the CMC pairs. Unlike previous wiki literature (Arnold et al., 2009), the delegation of tasks in Googledocs made it possible for students to work together on one piece of writing without the negative interferences of self-elected leaders as noted in the F2F pairs. Also of note in the CMC environment is that students might be more likely to articulate their thoughts about the prompt and do so in English because they are acutely aware of the teacher's presence in the CMC space. Out of all of the student groups, it appears that only one CMC pair relied on its L1 (MC & SH CMC essay 4) while several F2F pairs spent at least some time code-switching (e.g. MC & LA F2F essay 1; EU & CH F2F essay 2).

It seems that Googledocs in a CMC environment, tended towards fostering creativity. Essays for both case-studies written over the internet had higher word count (M=689 words), on average, than when in the F2F environment (M= 570 words). This

higher number reinforces the claim that students were more freely writing in their own sections of the essay than the monitored compositions of the F2F groups. However, while students in the CMC context tended to foster rather than stifle creativity, this was certainly not fool-safe. The "free-rider effect" that frustrated SE in F2F essay 2 did not disappear in the CMC environment (Johnson & Johnson, 1994 as referenced in Arnold et al., 2009). Although it was perhaps less conspicuous, MC still mentioned in her last survey (for essay 4) that her partner in essay 2 had, after ninety-minutes, contributed a mere sentence or two. This free-rider effect negatively affected the group dynamic in both tasks, but perhaps more so in a F2F environment where it was more difficult to hide a lack of input.

It has been my experience that students struggle with cohesion and unity in their own writing. Whereas they can easily identify techniques of cohesion and lack of unity in textbook exercises, they have difficulty putting their receptive knowledge to productive use. Perhaps, then, Googledocs could serve as a classroom tool where students' awareness is raised thereby drawing their attention to the need for cohesive devices. If this CMC exchange were the first in a series of writing sessions, then Googledocs would present a potential opportunity for such experiential learning. These latter discussions could be carried out F2F or in the CMC environment, employing the chat features of Gmail. Perhaps students would, after these initial individual contributions noted in the current research, participate more collaboratively in later writing sessions, as Kessler and Bikowski (2010) observed in their participants' creation of a semester-long wiki.

Such group work might function to benefit the whole, a necessary but often absent component of most writing groups that participate in peer review; that is, in a traditional peer review group, the individual has composed a piece that is then workshopped, not for the benefit of the group but for the benefit of the individual's work (Carson & Nelson (1994). Unlike this, the Googledoc has been a result of (at the very least) cooperation. If it then undergoes multiple drafts and peer reviews by the members of the original group, students may feel a greater sense of ownership, benefit, and investment.

#### Summary and Future Research.

If teachers intend to use Googledocs in the classroom as a synchronous collaborative tool, they ought to prepare themselves for possibility that learners might engage in cooperation rather than collaboration (Haythornthwaite, 2006). While cooperation is not negative in itself, the type witnessed in the current research revealed minimal amounts of surface-level interaction. Student commentary on the difficulty of seeing their peer's writing, chatting, and edits make it hard to claim that students are observing and/or benefitting from observing the writing process of their peers. Although the findings are certainly tentative, there is little evidence to support the integration of Googledocs as a computer supported collaborative learning tool, either from a cognitive or sociocultural standpoint. The use of an eye-tracker in conjunction with Googledoc revision history might prove useful in fully understanding whether or not students are noticing the linguistic moves their partners make.

Perhaps the true value of the Googledocs, however may lie in its ability to facilitate efficient division of labor in peer groups thereby functioning as a production tool whose product could be used in later collaborations. A telling follow-up study

would be to have students participate in Googledocs as an ungraded, untimed assignment that was explicitly linked to other course assignments. One possibility might be to have students work together as they did in the current study. After each pair created a draft, they could work together (either in F2F or CMC) to revise the draft further, focusing on development of ideas and cohesion/unity. That is, teachers could exploit Googledocs for its benefits of efficiency and use it as the starting point for a collaboratively written multi-draft essay. It would be interesting to see whether students would respond well to collaborative work in a long-term assignment where they were equally invested in the assignment (Carson & Nelson, 1994) as well as to see if the multiple-iterations approach would result in an evolution of the collaborative process, as Arnold, Ducate, Lomicka, and Lord (2009) found in their study of a semester-long class wiki.

Another study that would shed light on Googledocs would be to look carefully at the few groups who chatted throughout the task; that is, the students who might have truly collaborated using Googledocs as their interface. A better grasp of these interactions may prove useful in grasping what teachers can do to promote collaboration in the language classroom.

#### Limitations

Although the current study does offer some insight into how students engage in a collaborative writing task while using the Googledocs interface, it has numerous limitations that need to be acknowledged. First, because it was a qualitative study, one must take care in generalizing the results to a wider population. Second, as already noted, although an attempt has been made to nest this research in an understandable context, these data come from a few individual writing tasks of a small sample of

convenience. Any claims of generalizability were significantly reduced when the plan for counterbalancing the tasks was made impossible. And, while an attempt was made to seek second ratings on the holistic essays, the remainder of the coded data did not get second-rated. Furthermore, recreating the essay construction in Googledocs made for a particularly time consuming task such that a widespread analysis of many students proved impossible. Internal validity may have been compromised as the researcher was also the teacher and, at times, the needs of the students overrode experimental concerns. Finally, external validity may have been compromised by the timed nature of the writing activity.

APPENDIX

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# APPENDIX A

# Appendix A. Holistic rubric for essays

CONTENT		Teacher Comments
	Address the prompt	
	Shows understanding of and reflection on	
	the story?	
DEVELOPMENT	-	
	Specific examples and/or details from the	
	text	
	Explain how examples and/or details are	
	relevant	
ORGANIZATION		
	Logical	
	Ideas are clear and easy to understand	
	Coherence & Unity (in sentence, between	
	sentence, between paragraphs)	
LANGUAGE	, , , , , , , , , , , , , , , , , , , ,	
	Vocabulary	
	Grammar	

F

#### APPENDIX B

Appendix B. Survey for Task 1 -3

#### I. Self and Partner-Assessment

1.) I believe that my group participation grade for today is (circle one):

1.0 (bad/needs LOT of improvement)	2.0 (needs some improvement)
3.0 (good enough to get a good grade)	4.0 (excellent—it was the best)

2.) I believe this to be true because . . . (Explain)

3.) Today, I believe that MY PARTNER'S participation grade for today is (circle one):

1.0 (bad/needs LOT of improvement)	2.0 (needs some improvement)
------------------------------------	------------------------------

3.0 (good enough to get a good grade) 4.0 (excellent—it was the best)

5.) I believe this to be true because . . . (Explain)

#### **II. Activity Assessment**

	Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree
1. It was difficult because my partner and I couldn't agree.	1	2	3	4	5
2. I loved this activity.	1	2	3	4	5
3. I thought this	1	2	3	4	5

assignment was fun.					
4. I think that writing with another person is good language practice.	1	2	3	4	5
5. I liked sitting next to my partner and working.	1	2	3	4	5
6. I would like to do more in-class assignments like this one.	1	2	3	4	5
7. I had a hard time writing this essay because we had to use a computer. I would have done a better job if it were hand- written.	1	2	3	4	5
8. I feel like I learned something today.	1	2	3	4	5
9. I liked using Google Documents to compose my essay.	1	2	3	4	5

# III. Short answer:

1. Was it easy to communicate with your partner? If yes, why? If no, why not?

2. While working on the essay, what were you thinking and feeling?

3. What did you write about? Did you find it difficult to decide how to write the essay?

- 4. If you found it difficult, what made it difficult?
- 5. Describe the writing process. What did you find easy? Hard?

6. What do you think about communicating with your partner this way?

7. Would you want to do more similar activities? Why or why not?

8. In the future, would you prefer to write with the same tools as you used today? Why or why not?

# APPENDIX C

### Sample Prompt (Essay 1)

Based on your reading, reflections, class work, and discussions about Chopin's "Story of An Hour" and Collier's "The Chaser," work together with your partner to write an essay on the following topic:

The portrayal of love in each story is different. Describe how the author portrays love in each story. Use examples from the stories to support your claim. Then, compare/contrast it to your own beliefs, thoughts, and/or feelings on what love should be. Use personal experience (illustrations and anecdotes) to support and explain your beliefs. As always, remember to be clear and concise in your ideas.

#### Good Luck!

#### Sample Prompt (Essay 2)

Based on your reading, reflections, class work, and discussions about Saroyan's "A Beautiful White Horse" **OR** Jackson's "The Lottery" work together with your partner to write an essay on morality.

Describe how the author defines morality and what conclusion he/she comes to about the actions of his/her characters (i.e. were the character's actions moral in the author's opinion?). Use examples from the story to support your claim. Then, compare/contrast it to your own beliefs, thoughts, and/or feelings on whether or not the character's actions were moral. Use personal experience (illustrations and anecdotes) as well as class discussion and any outside knowledge you may have to support and explain your beliefs. As always, remember to be clear and concise in your ideas.

### Good Luck!

# APPENDIX D

DISCUSSION DIRECTOR

Name \_\_\_\_\_

Group \_\_\_\_\_

Book

Assignment pages \_\_\_\_\_ to \_\_\_\_

You are the **discussion director**. Your job is to write down some good questions that you think your group will want to talk about. This is NOT a quiz!! Your task is to help your group discuss the big ideas of the reading (book, article, passage or poem). Usually the best discussion topics come from your thoughts, feelings and questions as you read.

Possible discussion questions or topics for today:

Why ...

How ...

If ...

Some general questions to start a discussion:

- What did you think about this section?
- Can someone summarize briefly?
- Were you surprised by anything in this section?
- What questions do you have after reading this section?
- What is one important idea for you from this section?

 During the discussion, make sure everyone has an equal chance to speak!

 Today I called upon the following people to share their ideas:

 \_\_\_\_\_Word Finder
 Passage Picker
 Connector

#### (SAMPLE) Other Responsibilities

1. Word Finding: Look for and write down at least two special words in the reading. Look for words that are new, different, strange, funny, interesting, important, difficult, or dialectal. Be prepared to share these with the group when the Word Finder asks you.

Word	Page	Why I picked this word
	<u>.                                    </u>	

2. Passage Picking: Find and choose one or two parts of the story that you want to read aloud to the group. Look for passages that may be funny, good, scary, sad, interesting, descriptive, surprising, or important. Be prepared to share these with the group when the Passage Picker asks you.

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Page	Paragraph	Why I liked this passage	
			<u> </u>
		····· · · · · · · · · · · · · · · · ·	

3. Connecting: Find a connection between the reading and other readings and the outside world. Connect the reading to your own life, happenings, similar events, other people or problems, other stories or books you've read, etc. Be prepared to share this with the group when the Connector asks you.

"Something today's reading reminded me of was . . . "

WORD FINDER

1

Name		
Group		
Book	Assignment pages	to

You are the Word Finder. Your job is to look for special words in the reading. Look for words that are:

•	new	interesting
•	different	important
•	strange	difficult
•	funny	dialectal

When you find a word that you want to talk about, mark it with a post-it note or write it down here:

Word	Page	Why I picked this word
·		

When your group meets, help your friends talk about the words you have chosen. Some ideas you can discuss:

How does this word fit into the passage? How important is it to the passage? Does anyone know what this word means? Shall we look it up in the dictionary? How do you use this word? Does anyone know other forms of this word –that is related forms?

What do you feel when you read, hear or see this word? Can you draw this word?

**PASSAGE PICKER** 

Name\_\_\_\_\_

Group \_\_\_\_\_

Book \_\_\_\_\_ Assignment pages \_\_\_\_

You are the Passage Picker: Your job is to find and choose or pick parts of the story that you want to read aloud to your group, or want your group to think about. These passages may be:

a good part	an interesting part
a funny part	some good writing
a scary part	a good description
a sad part	something surprising or important

Be sure to mark the parts you want to share with a post-it note or bookmark. You may also write down the page and paragraph numbers. In either case, make a note to yourself here WHY you liked it.

Parts to read	out loud:	
Page	Paragraph	Why I liked it
	<u> </u>	<u></u>
	<u> </u>	

You may also ask someone else to read one of your passages aloud, and then you could ask the rest of the group why THEY THINK you chose that passage!

CONNECTOR

Name		
Group		
Book	Assignment pages	to

You are the Connector. Your job is to find connections between the reading you are assigned to discuss and other readings and the outside world. This means connecting the reading to:

your own life happenings at school or locally similar events in other places and at other times other people or problems other books, stories or articles other writings on the same topic other writings by the same author

Below, write some notes to remind yourself, "Some things today's reading reminded me of were..."

Reporter	Date
Name	
Group	
Book	Assignment pages to

You are the **REPORTER.** Your job is to take **DETAILED** notes on the entire discussion and to write a report of the accomplishments of the group that week. You will hand this in the following Monday. The report should carefully describe what your group talked about, the vocabulary you discussed and learned, the passages you read together, the connections you made, etc. The group may work on this at the end of group time. The report should be a minimum of 1.5 pages typed and double-spaced. The **GROUP** will receive a grade for the report each week.

### APPENDIX E



#### **Collaborative Writing Assignment 1: Directions**

A. This is a 1-hour 30-minute timed writing. You and your partner will work together to write this essay. Each of you will have your own computer, and you will be sharing the same Google Document on the Internet. To communicate with each other, you will use the GMAIL chat program in your email. As you begin this task, remember what we have discussed about the three steps of the writing process: pre-writing, writing, and proofreading. Your teacher will announce these to help keep you on track.

B. You now need to log-in to your GMAIL account. To do this, follow the instructions below:

1. Go to www.gmail.com

2. Sign in to the Gmail account: USERNAME: PASSWORD:

3. Check your email "Inbox" for an email from cazarmoscas2@gmail called "Assignment 1"

4. Click on the email.

5. Click on the blue link.

6. Your Google Document is now open. Type your CHAT name at the top of the page.

Your CHAT NAME: \_\_\_\_\_

7. Minimize the Google Document and Maximize your email. Find your partner in the "Chat" box on the left of your email.

Your PARTNER'S CHAT NAME: \_\_\_\_\_

8. Click on your partner's name to open a chat box.

C. During the writing time, you should have out copies of the short stories and any notes. Your instructor will hand out writing prompts. Keep the prompts face down until you are instructed to turn them over. Once instructed, turn over your sheets, and begin prewriting with your partner using Gmail Chat.

D. After you have finished brainstorming, the two of you should begin writing your essay. Remember that both of you will be typing into the same document, so you will see what your partner is writing. BUT, in order to show your partner what you are writing, you must push the **"SAVE"** button. You should save your work every couple of minutes. Remember to WORK TOGETHER to compose the essay as I will be able to see what both of you write as well as the final product.

E. When time is called, save your document once more and then log out. I will print off your document and grade it for you.

# APPENDIX F



### **Collaborative Writing Assignment 1: Directions**

A. This is a 1-hour 30-minute timed writing. You and your partner will work together to write this essay. You and your partner will be sitting next to each other and sharing a computer Google Document on the Internet. You should talk just as you would in class. As you begin this task, remember what we have discussed about the three steps of the writing process: pre-writing, writing, and proofreading. Your teacher will announce times to help keep you on track.

B. You now need to log-in to your GMAIL account. To do this, follow the instructions below:

1. Go to www.gmail.com

2. Sign in to the Gmail	l account:
USERNAME:	
PASSWORD:	

3. Check your email "Inbox" for an email from cazarmoscas2@gmail called "Assignment 1"

4. Click on the email.

5. Click on the blue link.

6. Your Google Document is now open. Type you and your partner's name at the top of the page.

C. During the writing time, you should have out copies of the short stories and any notes. Your instructor will hand out writing prompts. Keep the prompts face down until you are instructed to turn them over. Once instructed, turn over your sheets, and begin prewriting with your partner. You may use the scrap paper provided.

D. After you have finished brainstorming, the two of you should begin writing your essay. Remember that both of you will be typing into the same document. You should save your work every couple of minutes. Remember to WORK TOGETHER to compose the essay.

E. When time is called, save your document once more and then log out. I will print off your document and grade it for you.

# YOU SHOULD WRITE AS MUCH AS YOU CAN, AS WELL AS YOU CAN! GOOD LUCK!

# YOU NOW SHOULD TURN ON YOUR VOICE RECORDER BY PUSHING "RECORD" AND BEGIN PRE-WRITING OUT LOUD.

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