UC Berkeley

UC Berkeley Electronic Theses and Dissertations

Title

Write to speak revisited: An ecological investigation of transfer between chatting and speaking in foreign languages

Permalink

https://escholarship.org/uc/item/5px2w7d6

Author

Mendelson, Adam

Publication Date

2014

Peer reviewed|Thesis/dissertation

Write to Speak Revisited: An Ecological Investigation of Transfer between Chatting and Speaking in Foreign Languages

By

Adam Joseph Mendelson

A dissertation submitted in partial satisfaction of the

requirements for the degree of

Doctor of Philosophy

in

Education

in the

Graduate Division

of the

University of California, Berkeley

Committee in charge:

Professor Claire J. Kramsch, Chair
Professor Richard Kern
Professor Glynda A. Hull

Spring 2014

Abstract

Write to Speak Revisited: An Ecological Investigation of Transfer between Chatting and
Speaking in Foreign Languages

by

Adam Joseph Mendelson

Doctor of Philosophy in Education

University of California, Berkeley

Professor Claire Kramsch, Chair

Dating back to some of the earliest investigations of the use of text-based, online chat in foreign
language instruction, researchers and instructors have been hypothesizing that and asking if there
is some transfer between chatting and oral language development (e.g., Beauvois, 1992; Chun,
1994). The possibility of this sort of transfer is especially promising for the many students whose
ability to speak their foreign language lags behind their ability to read and write. In these cases,
the written nature of text-based chat might enable students to take advantage of their literacy
skills, while the real-time interaction involved in chatting might support the acquisition of
fluency and conversational genres associated with oral communication.

Research in this area has relied almost exclusively on experimental and quasi-experimental
studies in which oral language development of students who engage in chat has been compared
with the development of students who receive only classroom instruction (e.g., Abrams, 2003a;
Beauvois, 1997b; Payne & Whitney, 2002). All published findings have been quite promising in
that in all cases students who received chat-based instruction achieved gains in oral development
that were equal to or greater than those of students in control conditions. Even so, while this
body of research strongly supports the premise that transfer between chatting and speaking does
occur, these studies do not adequately describe the phenomenon, much less explain it. As such,
existing work in this area cannot provide any concrete suggestions for how to integrate text-
based chat into foreign language instruction in order to target specific learning goals. At most,
existing research can only vaguely suggest that in general chatting may be beneficial for
speaking.

My dissertation attempts to provide a much greater level of specificity about the phenomenon of
transfer between chatting and speaking than what currently exists in the research literature.
Rather than adopting an experimental or comparative approach that would likely be limited to
finding that transfer does or does not occur, I have used a qualitative, multi-case approach that
has enabled me to construct detailed descriptions of the phenomenon, and to connect specific
cases of this transfer to the instructional contexts in which they occurred. I refer to my
investigation as "ecological" in part because I adopt many of the analytical constructs associated
with ecological perspectives on second language acquisition (e.g., Kramsch, 2002b), and also

because of my explicit consideration of and attempts to make connections between multiple scales, ranging from individual students transferring specific linguistic items between online and offline activities, to more general patterns that emerge throughout and across groups of students over multiple semesters.

Also unique to my investigation of transfer between chatting and speaking is the fact that my approach is multidisciplinary. Specifically, I draw heavily from three areas of research: second language acquisition (SLA), computer-mediated communication (CMC), and transfer of learning. My integration of research on transfer is especially valuable because it provides both methodological suggestions for investigating this phenomenon, as well as frameworks for analyzing more specifically exactly what transfers and under what circumstances (e.g., Barnett & Ceci, 2002).

I do not pretend to have captured the full range of possible transfer-related outcomes, but through my five rounds of data collection in university level classes of Spanish as a foreign language in which chat-based activities were either integrated into required classroom instruction, or offered as optional tutoring, two clear, but quite different patterns have emerged. On one hand, I have found that foreign language chat can be quite social, informal, and even playful. Under these circumstances, the benefits for oral language development may be primarily social and affective. Specifically, informal chat can provide students with opportunities to get to know one another better and to become more comfortable with each other. When this happens, students can become more willing to engage in oral communication with one another, and this increased engagement can support oral language development. On the other hand, chat-based instruction can also be highly structured in ways that provide students with opportunities to practice specific linguistic forms and communicative functions, including forms and functions associated with academic discourse. Under these circumstances, practice in chat can support subsequent oral use of these specific forms and functions.

My dissertation makes multiple contributions to the different fields from which it draws. For applied linguistics, the two different patterns described above support two pedagogical suggestions: (1) Unstructured or explicitly social chatting can facilitate subsequent oral communication by enabling students to become more comfortable with one another; (2) Highly structured chat-based instruction can target specific linguistic forms and communicative functions, providing practice for subsequent oral use of these forms and functions. For CMC, my range of outcomes points to the flexibility of chat as a medium that can support a wide range of interactions and genres, including those normally associated with academic discourse. Additionally, my data highlight the increasing fluidity with which students maintain relationships and identity performances across media (e.g., Baym, 2010; Leander, 2008). Finally, for research on transfer of learning, a sub-field of the learning sciences, my dissertation contributes to an emerging ecological perspective on transfer (e.g., Greeno, Smith, & Moore, 1993). This perspective views transfer as a relational phenomenon in which learners are active participants in creating and defining the contexts in which learning and transfer occur (Lave, 1988; Pea, 1987).

For Randi

Acknowledgements

While writing this dissertation involved extended solitary work and periods of isolation (both physical and otherwise), it is undoubtedly the case that I never could have completed this journey without tremendous support from a huge number of people from numerous facets of my life.

Claire Kramsch and Rick Kern have been with me since day one of this dissertation, from listening to my initial articulations of my research topic nearly eight years ago, to catching last minute typos a matter of days ago. They have been a constant source of encouragement and constructive criticism that has consistently helped me remain excited about this work while pushing myself to make it better. Randi Engle taught me the nuts and bolts of conducting educational research, from data collection to analysis to publication, and fueled my intellectual passion for transfer of learning. The level of collaboration and voice she gave me in her research provided me with authentic practice for conducting my own, while also helping me form the theoretical lens with which I approached this work. From my own personal perspective, the biggest shortcoming of my dissertation is that I wasn't able to finish it before she died. Despite her absence, she remained a fundamental member of my imagined audience. Glynda Hull provided exactly the understanding and support that I needed after losing Randi. At a time when I was filled with fears and doubts about what would happen next, Glynda helped make the transition as smooth and comfortable as I can imagine. Bernie Gifford saw potential in me that others initially did not. Without his encouragement and strategizing, I never would have ended up at Berkeley in the first place.

I had numerous allies in the Spanish department that were fundamental to this project. Celinés Villalba welcomed me into the department, and provided me with the flexibility, patience, and support necessary to actually conduct this research. Multiple instructors invited me into their classrooms. In particular, I want to recognize Mayra Bottaro for allowing me to tinker with her instruction while engaging me in critically reflective discussions about what I was doing and why. Much more than a subject of my research, she was a co-designer of activities that I continued to use over multiple rounds of data collection. Verónica López and Mari Mordecai made me feel at home in the department. And of course, none of this research would have been possible without the participation of my students and those of my fellow instructors.

Many of my classmates and on-campus colleagues have also helped me along the way through their encouragement, feedback, passionate discussion, commiseration, sharing of resources, and willingness to blow off steam from time to time. Dave Malinowski deserves special acknowledgement for putting up with my regularly interrupting our beer and baseball sessions with research-related concerns. I also want to thank Tim Wolcott, Amy Stornaiuolo, Kimberly Vinall, Maxine McKinney de Royston, Dan Perkel, Carlton Fong, Usree Bhattacharya-Haddad, Sera Hernandez, Luke Miratrix, Xenia Meyer, Diane Lam, Adi Adirerdja, and all of my fellow members of Randi's Discourse in Learning Lab who endured early drafts of almost everything I've written in the last several years.

There are also many people from beyond Berkeley who have helped shape this work and me as a researcher. I benefited greatly from the personal attention, guidance, feedback, and encouragement I received over the last several years at CALICO and AAAL from Steve Thorne,

Scott Payne, Shannon Sauro, Marta González-Lloret, Julie Sykes, Jon Reinhardt, and Bryan Smith, and at AERA from Jim Greeno, Roy Pea, and Kevin Leander. It was also crucial to be able to share and compare my experiences as a doctoral student with my life-long friends who had either already gone through or were concurrently going through the same process at other institutions: Joe Schear, Dylan Herrick, Chris Ryan, Tanit Fernández, and Jenna Jordan. While I would never want academia to actually define these friendships, I greatly appreciate the support I felt from being able to talk shop during otherwise social occasions.

Several people deserve acknowledgment for helping me discover and begin to develop my passion for researching pedagogical uses of computer-mediated communication before I even considered pursuing a Ph.D. Eric Webber, Eduardo Diaz del Rio, Elena Liquete, and my other co-workers from IESE Business School were crucial in this regard. IESE also provided me with professional development opportunities through which I connected with additional mentors and collaborators: Joaquín Gairín, Iñigo Babot, José Lozano, and Lee Schlenker. Craig McLaughlan was a huge source of moral support, strategizing, and diversion when I first started tinkering with computer-assisted language learning, and Jesse Drogin and Anyoto Fambrough helped spark my initial interests in programing and web development.

Finally, words cannot begin to do justice to the gratitude I feel towards my family for enabling me to complete my Ph.D. My wife, Mari, has been an endless source of patience and support as I have taken her and our children down an uncertain path. She was not only willing to sacrifice our comfortable life in Barcelona so that I could pursue this very personal goal, but she has then excelled as the primary pillar of stability in our home, and an amazing contributor to our local community. I feel so lucky to have her in my life. My parents, Roger and Monique, have been absolutely fundamental to making life in California not just possible, but comfortable. Pursuing this degree made it impossible for me and Mari to maintain the quality of life we were accustomed to and wanted to provide for our children. My parents picked up that slack. My sister, Laura, brother-in-law, Greg, cousin, Elizabeth, and cousin-in-law, Anthony, form an extended network of support for me, Mari, and our children. Watching my children develop strong friendships with their cousins has been a beautiful bonus to this academic adventure. I also thank Mari's parents, Manolo and Maricarmen, for embracing our decision to make the move to California despite the fact that it meant losing daily contact with their daughter and grandchildren.

Adam Mendelson, May 12, 2014.

Chapter One
Introduction: A finding in need of explanations

In 1997, Margaret Healy Beauvois published *Write to speak: the effect of electronic communication on the oral achievement of fourth semester French students*. This book chapter marked the first published investigation of transfer between synchronous text-based computer-mediated communication (SCMC; i.e., chat) and subsequent oral communication in a foreign language. Beauvois found that students who regularly engaged in chat-based activities over the course of a semester performed significantly better on end-of-semester evaluations of oral communication than students who had not. This outcome represented the first data supporting the idea that chatting in a foreign language could have a positive impact on, or positively transfer to, speaking that language.

For many, this was exciting news. At that time some researchers considered speaking to be "arguably the most important skill" for foreign language learners (Egan, 1999, p. 277), and the prevailing assumption was that oral language development required oral production (Swain, 1985). Even some researchers of computer-assisted language learning (CALL) assumed that approaches based on text-based CMC could not promote oral language development because these approaches "keep the learner mute" (Egan, 1999, p. 280). Instead, leading pedagogical models posited oral interaction between learners as the key to language development (Gass & Varonis, 1985).

Furthermore, multiple studies had also reported that speaking aloud caused high levels of anxiety for many students, including those who displayed lower levels of anxiety with other aspects of language learning and use (e.g., Horwitz, Horwitz, & Cope, 1986; MacIntyre & Gardner, 1991). Even some students that displayed high levels of competence with written language were often unwilling to engage in oral communication (MacIntyre, Clément, Dörnyei, & Noels, 1998). As a result, the assumed key to oral language development was also the biggest barrier for some students, leaving them stuck in a "vicious cycle" in which their reluctance to speak impeded them from learning to speak (MacIntyre, Noels, & Clément, 1997, p. 278).

Beauvois' (1997b) finding that oral language development might also be attainable through text-based chat eased some of the tension between pedagogical models emphasizing oral interactions and classrooms populated by students reluctant to speak. Concurrent research on CMC emphasized the relative anonymity of chatting, and touted its potential to enable introverted individuals to come out of their social shells (e.g., Turkle, 1995). Perhaps this medium could also provide reluctant language learners with a more comfortable environment for producing language that, while technically written, displayed many of the characteristics of spoken conversation (Chun, 1994; Kern, 1995). And perhaps this online language use truly could transfer to oral language development, a relationship that had been previously hypothesized (Beauvois, 1992; Chun, 1994), and now, for the first time, empirically supported by Beauvois (1997).

In the 15-plus years that have passed since Beauvois' (1997) groundbreaking study, the field of second language acquisition (SLA) and research on CALL have seen substantial changes, but the question of transfer between chatting and speaking remains as pertinent as ever (Chun, 2008; Kern, 2006). Foreign language pedagogy has seen a steadily increasing focus on cultural awareness (e.g., MLA Ad Hoc Committee on Foreign Languages, 2007) and literature as a window into target cultures (e.g., Paran, 2008), but researchers continue to argue that

"[s]peaking skills have a privileged status in the language-learning world" and "[b]oth educators and language learners consider speaking a fundamental communicative skill in which development is often expected" (Pino James, 2013, p. 25). Even the MLA Ad Hoc Committee's (2007) almost revolutionary reconceptualization of foreign language pedagogy as targeting translingual and transcultural competence as opposed to more traditional notions of communicative competence posits that students must "[a]chieve enough proficiency in the language to converse with educated native speakers" (p. 238) and departments must "set clear standards of achievement for undergraduate majors in speaking" (p.242) among other skills.

This continued emphasis on oral language development is perhaps especially true for Spanish, where students increasingly recognize the potential professional benefits of being able to speak the language locally (O'Connor, 2012). Accordingly, many programs are now trying to provide greater opportunities for students to use the language in their local communities (Caldwell, 2007; Ebacher, 2013; Hellebrandt & Varona, 1999; Pellettieri, 2011). Students in the department where I collected data for this dissertation clearly exemplified this desire for oral language development. In this department, all students are required to complete a beginning-of-semester survey on their experiences with and reasons for studying Spanish. On an open-ended question about their learning goals, almost 70% of the students that I taught and observed explicitly mentioned wanting to improve their ability to speak the language. About half of those students further linked this goal to their future professional plans, with several explicitly mentioning the importance of Spanish in California.

With regard to CALL, the last 15-plus years have seen a steady increase in the use of CMC, not only for instructional purposes, but also in the social lives of college-aged students. When researchers first began to explore text-based chat in foreign language classes, these efforts represented first-time experiences chatting for most research subjects (Beauvois, 1992; Chun, 1994; Kern, 1995; Warschauer, 1996). In contrast, today applied linguists safely assume that "[o]utside of the educational context, chat is ubiquitously present in the learners' environment" (Lamy & Hampel, 2007, p. 115), an assumption that is well supported by current research on CMC for social purposes (e.g., Baron, 2008; Baym, 2010; Leander & Lewis, 2008; Turkle, 2011). Ortega (2009) goes so far as to posit that "sociological trends make the inclusion of SCMC in contemporary classrooms no longer a choice, but rather a necessity and even an ethical imperative" (p. 248). Indeed, research on chatting in foreign language classes has gained such popularity that the number of empirical studies now justifies extensive literature reviews (Ortega, 2009; Sauro, 2011) and meta analyses (Lin, Huang, & Liou, 2013).

Furthermore, because online communication has firmly established itself as an integral part of everyday life (Haythornthwaite & Wellman, 2002), and online interactions increasingly take place between individuals who also interact in person (Baym, 2010; Leander & Lewis, 2008), there is a greater need than ever for people to be able to "shift seamlessly from digital to face-to-face contexts" (Leander & Lewis, 2008, p. 58). Language learners, therefore, in addition to learning to engage with both online and offline target language communities (Kern & Warschauer, 2000), must also learn to engage with communities that span multiple media and modalities. The importance of understanding transfer between chatting and speaking thus goes beyond the potential benefits of CMC for oral language development. This phenomenon is also at the center of language learners' increasing need to learn to operate between media and modalities as they learn to "operate between languages" (MLA Ad Hoc Committee on Foreign Languages, 2007, p. 237).

Among the growing body of research on SCMC for SLA, there is a steadily increasing number of studies focusing specifically on transfer between chatting and speaking (Abrams, 2003a; Beauvois, 1997b; C. Blake, 2009; Compton, 2002; Hirotani, 2009; Kost, 2004; Lam, 2004; Mehr, Zoghi, & Assadi, 2013; Payne & Ross, 2005; Payne & Whitney, 2002; Rezai & Zafari, 2010; Satar & Özdener, 2008; Sequeira, 2009; Shamsudin & Nesi, 2006; Sykes, 2005). The following chapter presents a full review of this research which clearly illustrates that this transfer can indeed occur.

While these positive findings are certainly encouraging, I argue that these studies actually do very little to describe, much less explain this transfer in a way that might productively inform the design and implementation of chat-based instruction. The overwhelming dependence on experimental and quasi-experimental work in this area provides strong evidence of improvements in oral development without providing sufficient analysis of chat logs and transcripts of spoken language to actually specify what it is that transferred between the two modalities (with Compton, 2002; Hirotani, 2009; Payne & Ross, 2005; Shamsudin & Nesi, 2006; and Sykes, 2005 as partial exceptions to this shortcoming). Furthermore, as Lin and colleagues (2013) point out in reviewing these experimental and quasi-experimental studies, "most SCMC studies provide little description of the tasks implemented" (p. 134). They call for "more detailed description of tasks [in order to] help CALL scholars identify more precisely the variables that have a definitive or major influence on L2 learning effectiveness in SCMC contexts" (p. 135).

This absence of detailed descriptions of the chat-based instruction that led to reports of transfer is matched by a general absence of proposed explanations for this transfer. To date, the only explanations put forth come from researchers working under an information processing paradigm who propose that chatting transfers to speaking because the two forms of communication are so similar that they must share the same underlying cognitive processes (C. Blake, 2009; Payne & Ross, 2005; Payne & Whitney, 2002). However, claiming this similarity is to conceptualize chatting and speaking as monolithic communicative practices as opposed to mediational tools that can support a wide range of communicative purposes (Finnegan, 1988). This explanation also implies a degree of technological determinism in which the nature of online interactions are attributed to the medium as opposed to the sociocultural context in which the interactions take place (see e.g., Baym, 1995 for more on this critique). In contrast, other researchers have demonstrated that learning and transfer outcomes depend less on the specific characteristics of mediational tools than on the ways in which those tools are used (Scribner & Cole, 1981; Warschauer, 2000). Furthermore, current calls for research on SCMC for SLA insist on greater consideration of contextual factors, such as task design, interlocutor(s), and the role of instructors, so that this research can actually explain its outcomes in ways that can inform pedagogy (Lin et al., 2013; Ortega, 2009).

My dissertation attempts to address some of the shortcomings of existing research on transfer between chatting and speaking by exploring the phenomenon in closer relation to the contexts of its occurrence. Specifically, through a multi-case study in the Spanish department of a Northern California university, I have investigated and documented multiple manifestations of transfer between chatting and speaking in relation to the specific instructional contexts in which these manifestations took place. The goals of this dissertation are twofold:

1. To provide rich descriptions of transfer between chatting and speaking that explicitly detail what actually transferred and under what specific circumstances.
2. To construct plausible explanations for this transfer based on multiple interrelated aspects of the instructional ecology.

My findings include two recurring manifestations of transfer between chatting and speaking. I have documented cases in which interpersonal bonds were strengthened online and led to offline interactions in the target language. I have also documented cases in which students used the chatroom to practice or rehearse utterances and grammatical structures that they later integrated into classroom discussions. I argue that these manifestations of transfer depend primarily on the relationships that students perceive between the ways in which they chat in Spanish and the ways in which they speak the language. These perceived relationships, however, emerge from complex interplay between the design of chat-based instruction, the way chat-based activities are integrated into the overall instructional context, the students' prior experiences with chatting, and the online behaviors of both students and instructors.

An investigation of "transfer"

But what exactly is transfer? While many of the empirical investigations and literature reviews I cited above and discuss in greater detail in the following chapter use the term "transfer" when discussing the focus of their research, none bother to specify exactly what they mean. Perhaps even more troubling, none of this work draws on the 100-plus years of transfer research conducted by educational psychologists, cognitive scientists, and learning scientists. My dissertation bucks this trend by engaging directly with this greater body of research on transfer as I see this research as eminently relevant to investigating transfer between chatting and speaking. Contemporary transfer research is especially relevant to my particular goal of describing and explaining transfer between chatting and speaking in relation to its instructional context because of the field's shifting focus on "not *whether* significant transfer of learning can occur but *under what conditions of learning*" (Perkins & Salomon, 2012, p. 248, emphasis original).

Transfer research dates back just over 100 years to the equally seminal yet differing work of Thorndike (e.g., Thorndike & Woodworth, 1901) and Judd (e.g., 1908). Thorndike defined transfer as "the influence of improvement on one mental function upon the efficiency of other functions" (Thorndike & Woodworth, 1901, p. 247), and claimed it occurred rarely. He proposed a behaviorist explanation for the phenomenon in which similar stimuli across different contexts triggered similar responses. Judd (1908) defined transfer as the phenomenon by which "every experience changes the individual's capacity for new experiences" (p. 34), and claimed it was common but sometimes undesirable. He proposed that desirable transfer depended on the possession of abstract knowledge that could be generalized and applied across a variety of contexts. These two opposing conceptualizations of transfer have, to some extent, marked two poles in the terrain of transfer research over the last century. Cognitive perspectives (cf. Judd) have focused on abstract and general knowledge that enables solving unfamiliar problems (e.g., Gentner & Gentner, 1983; Gick & Holyoak, 1983) while sociocultural perspectives (cf. Thorndike) have argued that transfer depends more so on "the social and cultural environment" than on individual agents (Laboratory of Comparative Human Cognition, 1983, p. 341). This historical division clearly parallels a similar rift in SLA research between proponents of information processing explanations (e.g., Gass & Madden, 1985) with their underlying Chomskian emphasis on individual cognition (e.g., Chomsky, 1965) as opposed to newer sociocultural approaches (e.g., Lantolf, 2000) whose emphasis on socialization may be mildly reminiscent for some of behaviorist conditioning (e.g., Skinner, 1957).

In educational research on transfer, these two camps tend to use different vocabulary to discuss and define the phenomenon. For example, a typical definition of transfer from a

4

contemporary cognitive perspective is "how knowledge *acquired* from one task or situation can be *applied* to a different one" (Nokes, 2009, p. 2 emphasis added). Socioculturalists, in contrast, view cognition as dependent on context, and therefore balk at conceptualizations of knowledge that treat it as an object that can be acquired, possessed, transported, and re-applied unchanged from one context to another (e.g., Lave, 1988; Packer, 2001). Some have called for eliminating the transfer metaphor altogether, and instead discussing the phenomenon in terms of "transition" (Beach, 1999), "transformation" (Packer, 2001), and "expansion" (Tuomi-Grohn & Engestrom, 2003). This move is reminiscent of sociocultural applied linguists who, drawing on the distinction made by Sfard (1988), reject the traditional metaphor of language development as a process of *acquisition* in favor of the alternative metaphor of *participation* (e.g., Pavlenko & Lantolf, 2000).

Despite disagreement regarding the cognitive and social factors that determine transfer as well as the vocabulary best used to discuss the phenomenon, there is general agreement in educational research of its importance to the field. Transfer researchers across theoretical camps stress that the time, energy, and money invested in all educational endeavors are based on the assumption that these endeavors will have some sort of lasting impact beyond the immediate conditions of instruction (e.g., Barnett & Ceci, 2002; Bransford & Schwartz, 1999; Engle, 2012). In her recent review of transfer in language learning, Larsen-Freeman (2013) pointed out that language instruction is motivated by this same assumption that learners will eventually be able to use their target language outside the classroom.

Larsen-Freeman's (2013) incorporation of transfer research into SLA research is as encouraging as it is rare. She is one of only a very small number of applied linguists who see the relevance of this rich body of research to the field of SLA (see also James, 2008). While SLA research certainly is concerned with enabling learners to use their target languages across a variety of contexts, applied linguists tend to associate the term "transfer" with contrastive analysis and the work of Selinker (1972). This work's focus on the errors that language learners make when their first languages interfere with their second language development has perhaps given the term more negative than positive connotations in SLA. In other words, while transfer is portrayed as something desirable in broader educational circles, in SLA it is often portrayed as interference that is to be avoided (although cf. e.g., Ellis, 2003 on task-based language teaching). These negative connotations may be one reason for the general absence of references to educational research on transfer in applied linguistics.

In the case of investigating transfer between chatting and speaking, this greater body of educational research on transfer represents an untapped resource for guiding investigations and making sense of findings. As I hope to demonstrate in this dissertation, existing research on transfer of learning from fields such as cognitive science, educational psychology, and the learning sciences has provided me with:

- Methodological guidance for collecting the data that best enabled me to explore my specific research questions.
- A wide range of analytical constructs offering possibilities for the manifestations of transfer I might find in my data, and vocabulary for describing my findings.
- Detailed taxonomies for specifying my findings in terms of exactly what transferred and from where to where.
- Theories against which to compare my findings and construct explanations of them.

While I draw from transfer research across the theoretical camps described above, I have been most heavily influenced by a relatively new perspective that attempts to overcome differences between cognitive and sociocultural views by positing transfer as a relational phenomenon. Aspects of this perspective come from work of learning scientists who have been associated with situated cognition, such as James Greeno (e.g., Greeno et al., 1993) and Randi Engle (2006). However, I refer to this emergent perspective as *ecological* because of its relational emphasis and use of theoretical constructs, such as Gibson's (1986) *affordances* and Bateson's (1972) *framing*, that are associated with ecological perspective in other fields. This perspective on transfer parallels the very similar ecological perspective on SLA that has emerged in applied linguistics in an attempt to overcome the reductionist dichotomy between language learning as a purely cognitive phenomenon and language learning as an epiphenomenon that accompanies socialization into existing speech communities (Kramsch, 2002b; Kramsch & Steffensen, 2008; Larsen-Freeman, 1997).

From an ecological perspective, transfer depends fundamentally on the relationships, or affordances, between an individual agent and his or her environment (Greeno et al., 1993 drawing from Gibson, 1986). These relationships, however, are not objectively given by nature, but subjectively perceived by the agent (Lave, 1988; Pea, 1987). At the same time, these perceptions are shaped by the social context which itself emerges from interaction between agents (Engle, 2006; Engle, Nguyen, & Mendelson, 2011). An ecological perspective does not doubt the importance of an individual's knowledge and abstract mental representations for transfer, but does stress the role of social context in cueing that knowledge as applicable or adaptable in relation to a given situation (Engle, Lam, Meyer, & Nix, 2012; Greeno et al., 1993; Hammer, Elby, Scherr, & Redish, 2005).

Adopting this perspective, which I further explain in my methods chapter, I use a definition of transfer that comes from an especially influential piece by Greeno and his colleagues (1993): "the question of transfer, then, is how learning to participate in an activity in one situation can influence (positively or negatively) one's ability to participate in another activity in a different situation" (p. 100). Specifically, this dissertation focuses on how participating in a variety of Spanish chat-based activities in multiples settings influenced language learners' oral use of Spanish in a variety of activities in multiple settings, and vice-versa.

Overview of chapters

The immediately following chapter presents a detailed review of research on transfer between online chatting and face-to-face speaking in foreign and second languages. The chapter opens with an overview of work on CMC for SLA in general, focusing on key replicated findings from work informed by the two most commonly employed theoretical frameworks of the last two decades: the interactionist perspective (e.g., Gass & Madden, 1985) and the sociocultural perspective (e.g., Lantolf & Appel, 1994). The remainder of the chapter is dedicated to an exhaustive review of all empirical work on transfer between chatting and speaking. This review includes not only studies explicitly designed to investigate transfer, but also anecdotal evidence from the larger body of research on CMC for SLA. The review draws extensively from work on transfer of learning from the larger field of educational research in order to illuminate patterns and gaps in the existing body of knowledge on transfer between L2 chatting and L2 speaking. One key issue that emerges from my review is that while there seems

to be the greatest level of interest in understanding potential long-term benefits of chatting for speaking, research that provides any detail of what specifically transferred and under what circumstances has generally focused on much shorter timescales.

Chapter Three presents the methods that were employed in conducting this dissertation, both in terms of conceptualizing the study and in terms of the actual nuts and bolts of collecting and analyzing data. In this chapter I specify that transfer between chatting and speaking is a particular type of transfer referred to as *collateral transition* (Beach, 1999) which is best explored through concurrent qualitative investigation of both online and offline language use (Leander, 2008). I also present a more detailed discussion of my adoption of an ecological perspective (Bateson, 1972; Bronfenbrenner, 1979; Gibson, 1986; Kramsch, 2002b) and justify taking a multi-case approach (Yin, 2009). The remainder of the chapter deals with the specific details of the who, what, where, and when of my data collection and analysis. Here I explain my emphasis on qualitative data (e.g., observations, fieldnotes, video and audio recordings, chatlogs, interviews) and discourse analysis (e.g., Herring, 2004; Jaworski & Coupland, 2006).

Chapters Four, Five, and Six make up the empirical portion of my dissertation in which I present my data and findings. Chapters Four and Five present detailed cases of two individual students who displayed quite different manifestations of transfer between chatting and speaking under quite different instructional configurations. As individual case studies, these two chapters are written as self-standing journal-ready articles, including additional literature reviews and methodological specification. Chapter Six is structured differently as it brings in data from multiple semesters in an attempt to contextualize and explain the individual cases presented in Chapters Four and Five.

In Chapter Four, I present the case of Xiao,[1] a second semester student of Spanish who elected to participate in an optional online tutoring project that revolved around weekly text-based chat sessions. This initial round of data collection was designed to focus exclusively on online language use. However, during chats and interviews Xiao frequently discussed speaking the language, and his reports provide strong evidence of transfer. Analysis of his chatlogs through a lens of identity as performance (e.g., Goffman, 1959) revealed a striking transformation in Xiao's online representation as a learner and user of Spanish. Early in the semester Xiao presented himself as a student who was quite critical of his Spanish class because it failed to help him overcome his perceived inadequacies as a Spanish speaker. By the end of the semester Xiao regularly reported speaking Spanish with his classmates, both in and out of class, and evaluated himself and his class much more positively. Intertwined with Xiao's transformation is evidence of a strengthening friendship with a classmate, Anthony, who also participated in the weekly chats and was frequently included in Xiao's reports of speaking Spanish. In terms of transfer, I argue that Anthony became a relevant factor in Xiao's dispositions towards the language and his opportunities to use it across media (Bereiter, 1995). Their friendship became an affordance that bridged their online and offline interactions, providing Xiao with practice and improvement of his oral language skills (Greeno et al., 1993).

Chapter Five focuses on Elizabeth, a third-semester student enrolled in a class that included several chat-based activities conducted in an on-campus computer lab. Detailed comparative analysis of Elizabeth's chatlogs and transcribed oral class discussions revealed strong evidence of transfer of a particular speech act (expressing opinions) and its associated linguistic constructions, both from chatroom to classroom and vice-versa. Additionally, there is

---

[1] All names of students and instructors throughout this dissertation are pseudonyms. My own name, however, does appear in some data excerpts as Adam or Amendelson.

evidence that chatting provided structured practice expressing opinions that supported improved oral grammaticality. The detailed analysis of bidirectional transfer make Elizabeth's case a rich description of an online/offline collateral transition (Beach, 1999; Leander, 2008). Her case is also revelatory (Yin, 2009) in that it illustrates chat-based interactions that more closely resembled an academic register than has generally been reported (e.g., Warner, 2004), and chat-based instruction that supported the development of oral academic discourse, an outcome that has frequently been the target of skepticism (Crystal, 2006; Durán, 2008; Kern, 1995).

Chapter Six presents a frame analysis (Goffman, 1974) of transfer between chatting and speaking that compares Xiao and Elizabeth's outcomes with one another and with other cases and episodes from my full data set. The goal of this analysis is to understand the relationships that learners perceive between chat-based activities and their other experiences – past and future, academic and social, online and off – because these sorts of perceived connections between contexts are believed to influence transfer (Engle, 2006; Greeno et al., 1993; Pea, 1987). Based on analysis of classroom, chatroom, and interview data spanning five semesters, I identify three key sources of these perceptions: (a) instructors' discursive moves that propose connections between chat-based activities and other aspects of instruction (cf. Engle, 2006); (b) students' discursive moves during chat-based activities that sometimes propose alternative connections (cf. Hammer et al., 2005); and (c) students' associations with the chat medium that imply connections with prior experiences chatting (Thorne, 2003). I show how these three factors work with and against one another to establish two recurring frames in my data, and how these two frames influence not only what students transfer from chatting to speaking, but also the communicative practices that they transfer in to chat-based instruction (Schwartz, Bransford, & Sears, 2005). When chat-based activities take on a playful frame, students transfer in informal communicative norms from prior experiences chatting socially, and transfer out interpersonal bonds that support subsequent oral language use (e.g., Xiao in Chapter Four). When chat-based activities takes on an academic/literary frame, students transfer in communicative norms they associate with classroom discussions, and transfer ideas, linguistic forms, and communicative functions they use and develop while chatting back out to subsequent classroom discussions (e.g., Elizabeth in Chapter 5).

Chapter Seven concludes this dissertation with a combination of summary and forward-looking discussion of future directions to build upon this line of research. The chapter opens with a summary of my findings and an articulation of the ecological explanation I propose for them. I then present implications (for both research and practice) as well as limitations of this work. The chapter then closes by considering future directions that look to interrogate and apply my findings in other areas of applied linguistics. I ponder questions such as: How might transfer between chatting and speaking manifest in online intercultural exchanges that take place prior to study abroad programs? How might chat-based instruction be integrated into foreign language service learning (e.g., Hellebrandt & Varona, 1999) in order to facilitate student interactions with local target language communities both online and off? How might chatting through social networking platforms, such as Facebook, transfer to using the language in the physical locations and with the offline friends that learners are *geotagging* through those same platforms (e.g., Roick & Heuser, 2013)? I anticipate that my future intellectual path will involve exploring questions such as these.

Chapter 2
Transfer between chatting and speaking: A review of research

This chapter presents an extensive review of research on transfer between chatting and speaking in foreign language learnings. As a backdrop to this research, I open with an overview of CMC for SLA, focusing on the most prevalent findings from work informed by the two most commonly employed theoretical frameworks of the last two decades: the interactionist perspective and the sociocultural perspective. I then turn specifically to existing empirical findings of transfer between chatting and speaking, reviewing explicit investigations of this phenomenon as well as anecdotal evidence from the larger body of work on CMC for SLA. In this review, I incorporate research on transfer-of-learning from the broader field of the learning sciences, drawing on theoretical constructs and empirical findings that help clarify patterns and gaps in the existing body of knowledge on transfer between chatting and speaking. I close the chapter by looking at the small number of proposed explanations for this phenomenon.

My general overview of CMC for SLA exposes that to date there has been much more investigation of what language learners do online than on the possible longer-lasting learning and development outcomes supported by online communication in the target language. In fact, work on transfer between chatting and speaking represents perhaps the largest attempt at considering lasting effects, and even here relatively little is known. Despite many indications that this transfer does indeed occur, only minimal attempts have been made to explain why, how, or under what circumstances it occurs. Furthermore, because of the reliance of this body of work on experimental and quasi-experimental research designs, simple claims that this transfer occurs grossly outnumber actual descriptions of it.

A brief overview of the application of computer-mediated communication to second language acquisition

The first half of this chapter is dedicated to briefly reviewing CMC for SLA in general. The intention of this review is not to be exhaustive, but rather to set the scene for the second half of the chapter that focuses specifically on transfer between chatting and speaking. This first half is further divided into two sub-sections. The first of these two sub-sections is dedicated to the basic pillars of and potential resonances between CMC and the two theories that have dominated the last two decades of research on CMC for SLA: the interactionist perspective and the sociocultural perspective. The second sub-section then turns to the most frequently reported and replicated findings from this research. A general pattern that is established in this first half of the chapter is that interactionist-informed research has tended to focus on the assumed linguistic and cognitive benefits of having language learners interact online with their classmates, while sociocultural-informed research has tended to focus on CMC's potential for facilitating access to and participation in target language communities.

SLA: Theoretically ready for CMC

In the 1990s, the field of SLA was primed to make use of the mass proliferation of networked computing (Kern & Warschauer, 2000). Two leading theories at that time, the well-established interactive perspective (e.g., Gass & Madden, 1985) and a newly emerging

sociocultural perspective (e.g., Lantolf & Appel, 1994), both supported pedagogical approaches that were well aligned with the communication and connectivity offered by synchronous and asynchronous, text-based, online environments. At the same time, these environments were becoming increasingly common on university campuses and in the lives of young adults.

   The interactionist perspective. As suggested by its name, the interactionist perspective of SLA emphasizes the role of social interaction in language learning much more so than prior approaches, such as audiolingual and grammar translation (see Lightbown & Spada, 2006 for an extensive review). Even so, at its core, the interactionist perspective is still one that fundamentally posits language acquisition as a cognitive phenomenon, as reflected by the incorporation of information processing metaphors such as "input" (e.g., Long, 1985) and "output" (e.g., Swain, 1985). According to this perspective, interaction is not only a process of exchanging inputs and outputs, but also a source of misunderstandings that require "negotiation of meaning" (e.g., Gass & Varonis, 1985; Varonis & Gass, 1985). It is through negotiation of meaning that learners "notice" gaps between their current level of communicative competence and their target language, and when these gaps are consciously noticed, input becomes "intake" such that it is incorporated into the learners interlanguage (Schmidt, 1990).

   There are several resonances between the interactionist perspective of SLA and the assumed affordances of text-based, computer-mediated communication (Chapelle, 2005). For starters, the very foundation of this perspective relies on language learners interacting with one another or with native speakers, and there may be some reasons to assume that CMC would facilitate this interaction. Even in foreign language classrooms, where multiple learners gather with an instructor, not all learners are guaranteed the interactions believed to be necessary for language acquisition. During whole-class activities in the classroom, there are a finite number of turns available, limiting some opportunities for interaction. In contrast, in online, text-based environments, interactants do not have to compete for any sort of traditional communicative floor, and can therefore make as many interventions to conversations as they choose without waiting for a turn (Crystal, 2006).

   It is also true that in language classrooms, some students avoid opportunities for interaction, through means such as not volunteering, reverting to their shared first language when assigned collaborative tasks, or freezing up when called on by their instructors. This lack of "willingness to communicate" (MacIntyre et al., 1998) is generally attributed to a combination of affective issues, such as low motivation and insecurity about one's ability to communicate effectively (see Lightbown & Spada, 2006, ch. 3 for an extensive review). In fact, some researchers have argued that one of the most important goals of language pedagogy is simply to increase the comfort and confidence of language learners so that the cognitive processes of SLA can naturally occur (e.g., Krashen, 1982; Young, 1991).

   Again, there are reasons to assume that CMC might alleviate some of these issues. SLA research on affective factors has long suggested that oral communication and pronunciation are major contributors to learner anxiety (e.g., MacIntyre & Gardner, 1991). In text-based, online environments, these anxieties disappear because communication takes place in writing rather than orally. In fact, early research on CMC argued that text-based, online communication decreased the salience of social cues, such as age, gender, race, accent, and others, leading to more egalitarian communication in general (e.g., Walther, 1992). The idea of semi-anonymous, egalitarian communication in reduced-anxiety environments seems quite promising for learners who are otherwise reluctant to engage in interactions in the classroom. At the same time, as these

same technologies were becoming more prominent in students' social lives, the novelty of including online communication to educational settings might also be a source of motivation.

In addition to the assumed affective benefits of CMC, other aspects of this form of communication also seem very well aligned with the cognitive mechanisms that underlie the interactionist perspective. Again, according to this perspective SLA depends primarily on comprehending input and negotiating meaning in order to notice gaps between one's interlanguage and one's target language structures. There are several features of text-based communication that may facilitate these processes by decreasing the cognitive demands of interaction (Chapelle, 2005; Payne & Whitney, 2002). Even in "synchronous" environments, inputs and outputs are exchanged in not quite real time because there is always some lag between composing and sending messages. This additional time decreases the cognitive pressures of simultaneously comprehending inputs and composing outputs. Also, messages are exchanged in text, which means they are processed visually as opposed to aurally. Additionally, this text persists in the chatroom, enabling extended time for processing. These factors decrease the cognitive demands of processing inputs while also providing a persistent and visual representation of one's outputs, making CMC seem like an ideal environment for negotiation of meaning. The visualization of outputs potentially facilitates noticing one's own errors and self-correcting. Similarly, corrective recasts may become more salient when the correction is displayed adjacent to the error on the computer screen. At the same time, the absence of visual cues requires that learners negotiate meaning linguistically rather than employing paralinguistic strategic competences. Finally, because of the decreased cognitive demands of online negotiation of meaning, learners are able to pay closer attention to linguistic features, increasing the amount of input that actually becomes intake that can be integrated into their interlanguage (McLaughlin, 1990).

The sociocultural perspective. The sociocultural perspective of SLA builds on Vygotsky's conceptualization of individual development as a process of internalizing social interactions and the culturally defined symbolic artifacts that mediate them (Lantolf, 2000; Lantolf & Appel, 1994; Lantolf & Thorne, 2006; Vygotsky, 1978). While the interactionist perspective centers on the metaphor of a brain "acquiring" a linguistic system, at the heart of the sociocultural perspective is the metaphor of a person "participating" in a larger community (Sfard, 1988). According to this perspective, participation in communicative practices in the target language is the goal of language learning and a fundamental part of the learning process (Donato, 2000; Kasper, 2001; Lantolf & Thorne, 2006; Pavlenko & Lantolf, 2000; Swain, 2000; van Lier, 2000; Watson-Gegeo & Nielsen, 2003). Language learning is viewed as a process of becoming a full participant in a target language speech community, and this learning occurs through legitimate participation in the communicative practices of that community (Lave & Wenger, 1991).

While the resonances between the assumed affordances of CMC and the interactionist perspective relate primarily to cognitive processes and demands, from the sociocultural perspective the biggest attraction of CMC relates to the potential access to target language communities that technology can provide. For this reason, while most interactionist research with CMC has involved students interacting online with their classmates, a greater portion of sociocultural research has involved language learners interacting online with native speakers. That's not to say that the sociocultural perspective is in any way inconsistent with student-student interactions online; such interactions support co-construction of linguistic knowledge

through "collective scaffolding" (Donato, 1994) and may facilitate the creation of a sense of community in the classroom. But, for a theoretical perspective that emphasizes participation in the authentic practices of target language communities, CMC potentially offers opportunities for that participation without the need for study abroad. Learners can potentially gain access to online communities that use their target language, and instructors can collaborate to organize "intercultural telecollaborations" in which groups of students from one country interact with groups of students from another country such that each group can practice and learn the language of the other. Additionally, CMC can foster the creation of a more inclusive community of learners within the classroom.

A review of key findings

A complete review of research on CMC for SLA is beyond the scope of this chapter, and several exemplary reviews have been published in recent years (Chun, 2008; Kern, 2006; Lamy & Hampel, 2007; Ortega, 2009; Sauro, 2011). In this section I limit myself to highlighting several key and replicated findings in relation to the theoretical perspectives presented above. The second half of this chapter is dedicated to an exhaustive review of work on the specific phenomenon of transfer between chatting and speaking, and each of my data chapters includes detailed reviews of the findings most relevant to the data presented in those chapters.

From the interactionist perspective, three questions take precedence in reviewing work on CMC for SLA: 1) Do language learners engage in interactions in the target language online? 2) Do these interactions include evidence of negotiation of meaning? And 3) what evidence is there that this negotiation of meaning leads to improvements in communicative competence?

The answer to the first question is a resounding "yes." One of the most frequently replicated findings in research on CMC for SLA comes from comparative studies that investigate quantity of interaction online versus in traditional classrooms. In terms of number of turns taken by number of different students, multiple studies have found that these levels are higher online (Beauvois, 1998a; Freiermuth & Jarrell, 2006; Hudson & Bruckman, 2002; Kern, 1995; Warschauer, 1996). Furthermore, even in cases in which instructors engage in chat with their students, researchers report that in chatrooms as opposed to classrooms there is more student directed discourse and student-student interactions, which some argue are especially beneficial for language development (Gass & Varonis, 1985; Varonis & Gass, 1985). Hudson & Bruckman's (2002) social network analysis of instruction in the two environments provides a particularly strong illustration of this difference.[2]

The answer to the second question, regarding negotiation of meaning, is not quite as straight forward. There are findings of students engaging in high levels of negotiation of meaning during chat-based instruction (R. Blake, 2000; Pellettieri, 2000; B. Smith, 2003). But Ortega's (2009) recent review on interactionist research of CMC for SLA reveals that the quantity of negotiation can vary greatly from study to study. Furthermore, she points out that those studies that report very high levels of negotiation of meaning involved dyadic tasks, such as jigsaws and infogaps, which were specifically designed to promote that negotiation (Pica, Kanagy, & Falodun, 1993).

The answer to the third question, regarding the development of communicative competence as a result of online interaction, and negotiation of meaning in particular, is outright

---

[2] It is worth noting that there are also findings of teacher-directed discourse in chat (Shin, 2006), but in the research literature these findings represent an exception.

murky. One difficulty in answering this question is that the majority of research on CMC for SLA has investigated online learner interactions and/or compared them with classroom interactions without necessarily attempting to measure lasting effects of these interactions. For example, of the dozens of interactionist-informed studies that Ortega (2009) reviewed, only a handful explicitly investigated learning outcomes, and their results are mixed. There are examples of online negotiation of meaning being linked to development of vocabulary and grammar, but there are negative cases also. Furthermore, in reviewing a longitudinal case study by González-Lloret (2008), Ortega (2009) suggests that the interlocutor and quality of negotiation may be more important than the quantity of negotiation. Accordingly, she writes, "Overall, the studies available at present are insufficient in number and inconsistent in design and focus, and thus preclude firm conclusions" (p. 245). As a whole it is safe to say that the field knows more about what students do online than about the longer-term learning outcomes of computer-mediated language instruction (Kern, 2006).

From the sociocultural perspective, perhaps the most important question in reviewing work on CMC for SLA is, to what extent do language learners meaningfully participate in communities that use their target language? This question has been investigated under three distinct scenarios, all of which conceptualize the notion of community somewhat differently. First, there are investigations of language learners attempting to participate in pre-existing, online communities of target language, and often native, speakers. Second, there are investigations of intercultural telecollaborations between groups of students from different countries learning one another's languages. Here, community has been investigated in terms of the degree to which these international groups engage in and establish communicative practices that are "authentic" beyond the typical scope of the classroom (Thorne, 2003). Third, there are studies that focus on the community of learners within the classroom, and investigate the role of CMC in supporting this community and making it more inclusive. Findings have been mixed in all three scenarios, ranging from encouraging cases of integration, cohesion, and meaningful participation to discouraging cases of the same sort of exclusion often experienced by language learners in offline communities (e.g., Norton, 2000).

With regard to language learners participating in pre-existing online communities, multiple researchers have reported positive findings in which immigrant students were able to gain access to target language interactions that they might otherwise be denied in face-to-face settings (Lam, 2000, 2004; Spiliotopoulos & Carey, 2005; Warschauer, 2000). In extreme cases, ESL students have been found to be able to "assume the role of native or near-native speakers" in online, text-based communities (Spiliotopoulos & Carey, 2005, p. 93), side-stepping the gate-keeping that can block participation offline (e.g. Norton, 2000). However, there are negative cases as well. Hudson and Bruckman (2002), for example, found some native speakers to be hostile and impatient with foreign language learners in public chatrooms. According to Lantolf and Thorne (2006), "very specific…forms of language use and online behavior [are] necessary for acceptance [in online communities]" (p. 251). When language learners fail to display the expected norms, they are likely to be exposed and rejected as "interlopers" (Crystal, 2006, p. 172).

With regard to the formation of bilingual communities through intercultural telecollaboration, findings are also mixed. Darhower (2007) followed several groups of English speaking American students interacting with Spanish speaking Puerto Rican students, and reported that some of the groups formed strong communities through high levels of participation, establishing roles and norms, and reciprocally supporting one another's language development.

However, other groups showed few signs of cohesion, and even within those groups that Darhower claims formed strong communities, they sometimes did so at the expense of excluding others. Thorne (2003) also presents multiple examples of telecollaboration with mixed results. In a positive case, chatting with an online "key pal" provided an American learner of French with "her first authentic communicative experience in [her target language]" (p. 57). In a contrasting case, French and American students struggled with clashing expectations regarding the form and objectives of their communications, impeding the sort of meaningful participation in one another's language practices that is generally the goal of these telecollaborative projects (see also Kramsch & Thorne, 2002).

In terms of the community of learners within a language classroom, there are multiple reports of this community becoming more inclusive through CMC, as many students who seldom participate in class do so online (e.g., Beauvois, 1998b; Hudson & Bruckman, 2002; Potts, 2005). However, Lantolf and Thorne (2006) present a contrasting case in which prior experience with CMC created a new and salient distinction between classmates, with experienced students being aggressive and dismissive towards less experienced students "just on the basis of their online communication" (p. 251). There are also examples of emergent communicative norms and participation in communicative practices that students perceive as meaningful beyond specific academic tasks (e.g., Abrams, 2008; Shin, 2006). But Shin (2006), for example, illustrates that as the community of learners becomes stronger through establishing norms, learners that don't adhere to those norms can be excluded.

In closing this brief overview of CMC for SLA, I remind my reader that I have not attempted to be exhaustive, and defer to several recent and more complete reviews (Chun, 2008; Kern, 2006; Lamy & Hampel, 2007; Ortega, 2009; Sauro, 2011). Instead, I have focused on the core principles and key findings of the two theoretical perspectives that first welcomed and now continue to embrace CMC for SLA. While the division is not always mutually exclusive, as a general categorization it is fair to say that interactionist informed interventions and investigations view CMC as facilitative of the cognitive processes that underlie language acquisition, and socioculturalist work posits CMC as offering access to meaningful participation in authentic communicative practices and communities. On both sides, empirical findings are mixed, and research has generally addressed what happens online much more thoroughly than the possibility of longer-term leaning outcomes beyond the chatroom. In the remainder of this chapter I turn to this crucial question of learning outcomes beyond the chatroom by presenting an exhaustive review of research on transfer between chatting and speaking.

Transfer between chatting and speaking

In his 2006 review of CMC for SLA, Kern concluded that
we have learned a great deal about the features of learner interactions and language use within online environments, *but we still know little about how those abilities might be transferred across different environments, communicative genres, and modalities.* (p. 202, emphasis mine)
In applied linguistics, transfer is sometimes associated with contrastive analysis and the work of Larry Selinker (e.g., 1972). In the broader field of educational research, and in Kern's uses the term in the above quote, transfer is generally understood as "how learning to participate in an activity in one situation can influence (positively or negatively) one's ability to participate in

another activity in a different situation" (Greeno et al., 1993, p. 100). According to renowned learning scientists John Bransford and Daniel Schwartz (1999), "A belief in transfer lies at the heart of our educational system. Most educators want learning activities to have positive effects that extend beyond the exact conditions of initial learning" (p. 61). In her introduction to a recent issue of a special strand of the *Journal of Learning Sciences* dedicated to research on transfer, Randi Engle (2012) added:

> [T]ransfer is arguably one of the most important issues in the learning sciences. The success of the educational enterprise requires that students are able to transfer what they have learned to future classes as well as to their professional, personal, and civic lives. Otherwise instruction is wasted. Therefore, knowing how to design learning environments to foster transfer is crucial if education is to be successful. (p. 347; see also Barnett & Ceci, 2002)

I would argue that transfer is equally fundamental to language learning as it is to other areas of education. Language instructors and learners alike want instruction to impact students' abilities to use their target language beyond the confines of an individual course and classroom (Larsen-Freeman, 2013).

Transfer may be especially important with respect to CMC for SLA. While it is true that "authentic discourse communities…are increasingly located on-line, [making it] appropriate to incorporate on-line activities [into language instruction] for their social utility as well as for their perceived particular pedagogical value" (Kern & Warschauer, 2000, p. 13), it is also true that the goals of many language learners and instructors revolve around the ability to use the language in face-to-face situations (Egan, 1999; Pino James, 2013). For some, learning a new language means being able to speak that language (see Nunan, 1999). As such, ideally CMC for SLA should not only contribute to learners' abilities to use their target language online, but also to use it offline.

Over the years, a small but growing body of research has investigated this online-to-offline transfer, with a particular emphasis on transfer between chatting and speaking. Even so prominent voices, such as Kern (2006) and Chun (2008), continue to call for a more research on this phenomenon. In this section, I review related work in an effort to illuminate what is known about transfer between chatting and speaking, and what explanations have been proposed and/or supported by these findings. My review takes two passes through this research, first briefly presenting the findings of each study, and then looking more closely at these findings through a lens of research on transfer-of-learning from the broader field of educational research. The second pass, by drawing on existing theories and findings about transfer, helps clarify with much greater specificity exactly what is known about transfer between chatting and speaking, as well as illuminating gaps in this knowledge regarding exactly what transfers, under which specific circumstances, and why.

Evidence of transfer between chatting and speaking

More than 20 years ago, Beauvois (1992) first asked, "Will there be some transfer of skills from one domain to another: from this reading-writing-thinking exercise [i.e., text-based chat] to improved oral language?" (p. 463). Some hypothesized that because communication that took place through text-based chat displayed features associated with oral communication (cf. Biber, 1986), chat might serve as a stepping stone for developing oral proficiency (e.g., Chun, 1994).

Beauvois (1997b) was also the first to publish an empirical investigation of this question through a quasi-experimental comparison between university-level language learners who had some of their face-to-face instruction replaced with chat-based activities, and a control group who received only classroom instruction. She found that the students who engaged in chat performed significantly better on end-of-semester evaluations of oral communication than students who had not engaged in chat. While her comparison is limited by the fact that she compared only final oral evaluations as opposed to pre-to-post gain scores, the outcome of her study represented the first data supporting the idea that chatting in a foreign language could positively transfer to speaking that language.

Beauvois' (1997b) work broke ground for multiple experimental and quasi-experimental investigations in subsequent years. The bulk of this research, like hers, consists of comparative studies between sections of intermediate-level foreign language courses at American universities in which experimental sections have some portion of their face-to-face instruction (often one class per week) replaced with chat-based activities that take place in an on-campus computer lab, while control sections receive only face-to-face instruction (Beauvois, 1997b; Hirotani, 2009; Kost, 2004; Payne & Whitney, 2002). Four additional studies follow essentially the same design with the exception that participants were American high school students of Spanish (Sequeira, 2009), learners of English as a second language at an American university (C. Blake, 2009), or high school students of English as a foreign language at institutes in Turkey (Satar & Özdener, 2008) or Iran (Mehr et al., 2013). While there are differences in these studies – for example, in addition to comparing chat and non-chat conditions some also include third conditions for comparing either voice-chat (Satar & Özdener, 2008) or asynchronous CMC (i.e., forums, Hirotani, 2009) – in all cases findings are consistent: when comparing gains in oral performance as measured through pre and post evaluations, those groups who engaged in text-based chat performed either as well as (Hirotani, 2009; Kost, 2004) or better than (Beauvois, 1997b; C. Blake, 2009; Mehr et al., 2013; Payne & Whitney, 2002; Satar & Özdener, 2008; Sequeira, 2009) control groups. While some may question the relevance of studies that found no differences between chat groups and control groups as evidence of transfer, as Payne and Ross (2005) point out:

> It is important to note that in the context of such comparisons, finding no significant differences is not a "non-result" from a pedagogical perspective. Achieving equivalent development in oral skills with reduced F2F [face-to-face] oral interaction should be considered a positive result. (p. 37)

Three additional comparative studies have also investigated transfer between chatting and speaking, but on a shorter timescale than a full semester or quarter. Abrams (2003a) investigated how chatting, participating in forums, and face-to-face instruction differentially prepared students for a subsequent whole group discussion, and found that the chat group produced the greatest amount of oral discourse during that discussion, although there were no differences in terms of the quality of that discourse. Sykes (2005) investigated the impact of text-based chat on the development of pragmatic competence (in the form of accepting or declining an invitation) during a week-long unit, and found that those students who practiced these speech acts through both text chat *and* face-to-face showed the greatest gains from pre to post oral performances. Shamsudin and Nesi (2006) investigated the impact of integrating text-based chat into a multi-week unit on needs assessment interviews and meetings in a course on English for specific

purposes for engineering students. Their findings were mixed in that their chat group outperformed their control group on one oral evaluation, but underperformed on another.

Compton (2002) took an exploratory approach in investigating transfer between chatting and speaking among a group of international graduate students enrolled in an ESL course at an American university. For this study she had students chat in pairs immediately before giving individual oral presentations. Her analysis showed that in their oral presentations students commonly repeated aspects of what they and their chatmates had previously written during the chats.

In addition to research that explicitly explores transfer between chatting and speaking, the larger body of work on CMC for SLA includes a handful of studies that provide anecdotal evidence of this transfer. Eva Lam (2004) studied the online and offline English language use of two Cantonese-speaking girls enrolled in ESL classes in a US high school. These girls spent several hours each week in a chatroom frequented by Cantonese-speaking English language learners from all over the world. Over the course of the 8-month study, Lam noticed improvements in the girls' confidence and oral fluency in English, and attributed these changes to their experience chatting. In a study on "flaming," or playful banter and teasing during chat-based activities in an intermediate German class, Abrams (2003b) found that some students who flamed the most online later engaged in similar playful banter in German in the classroom. In a study on differences in the social dynamics of class discussions that took place either in chatrooms or in classrooms, Hudson and Bruckman (2002) reported that some students became more willing to speak French with their classmates after getting to know them better through chatting. In a study on the impact of chat on foreign language students' attitudes and motivation, Beauvois' (1998b) subjects reported that chatting made them feel more confident using their target language during subsequent oral communication in class. Finally, while Shin's (2006) ethnographic case study of the inclusion of weekly chat sessions in a semester long ESL course for graduates students, visiting scholars, and spouses, does not provide direct evidence of transfer between chatting and speaking, some subjects reported the chats were helping them practice and prepare for their face-to-face interactions on campus.

Curiously, while the term "transfer" is used in many of the above studies on chatting and speaking (Abrams, 2003a; Compton, 2002; Hirotani, 2009; Lam, 2004; Payne & Whitney, 2002; Payne & Ross, 2005; Satar & Özdener, 2008; Sequeira, 2009; Shamsudin & Nesi, 2006) as well as in reviews of them (Chun, 2008; Kern, 2006; Lin et al., 2013), none of this work draws on the broader body of educational research on this phenomenon. Transfer has been investigated by educational psychologists, cognitive scientists, and learning scientists for over 100 years (e.g., Judd, 1908; Thorndike & Woodworth, 1901), and the knowledge generated by this work is undoubtedly relevant to research on transfer between chatting and speaking.

One particularly useful resource from the transfer literature is a taxonomy created by Barnett and Ceci (2002) for comparing studies in terms of what learned *content* transfers, and from what *context* to what *context*. In terms of content, Barnett and Ceci consider skills, knowledge, and changes in performance. In terms of context, they consider knowledge domain (i.e., topic), physical setting, timeframe, functional goal (e.g., practice vs. evaluation), social context (e.g., interlocutors or audience), and modality. Mapping existing studies on transfer between chatting and speaking onto Barnett and Ceci's taxonomy provides greater specification of what is known about this phenomenon, and illuminates some substantial gaps in this research.

As mentioned above, the largest group of studies on transfer between chatting and speaking are course-length, experimental and quasi-experimental comparisons between the oral

gains of students who have some portion of classroom instruction replaced with chat-based activities, and the gains of control groups who receive only classroom instruction. Mapping these studies onto Barnett and Ceci's (2002) taxonomy reaffirms the contextual similarities of these studies, but also reveals the degree of obscurity regarding the content that supposedly transfers. In terms of context, these studies consider transfer between chatting weekly for anywhere from 4 to 15 weeks with small groups of classmates, to then speaking during an interview-based oral evaluation with an instructor or researcher at the end of the study (Beauvois, 1997b; C. Blake, 2009; Hirotani, 2009; Kost, 2004; Payne & Whitney, 2002; Satar & Özdener, 2008).[3] In terms of content, however, with the exceptions of Hirotani (2009) and Payne and Whitney (2002), as revisited in Payne and Ross (2005), these course-length comparative studies generally do not provide sufficient analysis of language use during chat-based instruction to provide an idea of what may have transferred to speaking. In the learning sciences, it is understood that in order for some content to transfer from one context to another, that content must first be learned in the initial context (Bransford, Brown, & Cocking, 2000). Research on transfer between chatting and speaking that does not include analysis of chat logs, or at least detailed specification of the content of chat-based activities, cannot provide evidence that anything in particular was learned during chatting that could later transfer to speaking (Lin et al., 2013). In fairness to these studies, their experimental and quasi-experimental designs do provide compelling support that the chat based interventions in these studies had some *impact* on evaluations of oral proficiency, generally operationalized as some combination of quantity of discourse, grammatical correctness, fluency, and pronunciation. Indeed, in all cases the findings are positive. But as a whole, these studies fail to actually describe and illustrate the transfer that supposedly led to the reported oral gains.

Hiratoni (2009) and Payne and Ross (2005), a follow-up on Payne and Whitney's (2002) earlier work, are two notable exceptions to this failure to consider what may have actually transferred. Hiratoni (2009) performed detailed quantitative analysis of chat logs and transcripts of oral evaluations and found two significant and strong correlations. First, students who produced more language over 10 chat sessions also produced more language during final oral evaluations ($r = 0.656$, $p < .05$). Second, chatters who used more conjunctive adverbs (e.g., "also") similarly used more of these adverbs orally ($r = 0.640$, $p < .05$). These correlations do not necessarily indicate an impact of chatting on speaking, but do imply that quantity of discourse may be a characteristic of one's communicative competence that transfers across contexts: language learners that produce more language online may do the same offline.

Payne and Ross (2005) position their follow-up on Payne's earlier work (Payne & Whitney, 2002) as follows:

> Since the language generated in the chat sessions was not the subject of analysis in the first study, the focus of the present investigation is to examine the patterns of language use as evidenced in the chat transcripts (experimental group only) with the goal of better understanding the interplay between individual differences in working memory capacity, SCMC, and cross-modality transfer of skill from chatting to oral proficiency development. (Payne & Ross, 2005, p. 40)

In reviewing the prior study, they reiterate that the significant difference between the chat group and the control group was driven by differences only for students with lower phonological working memory, as measured on a test of non-word repetition. In terms of gains in oral

---

[3] In the case of Mehr et al. (2013) chats were one-on-one with an instructor as opposed to with classmates. In the case of Sequiera (2009), chats were one-on-one with a peer in a higher level course.

proficiency, these "low-span" students in the chat condition significantly outperformed their low-span counterparts in the control condition, but not the "high-span" students. In analyzing the chat logs, Payne and Ross (2005) found that "The low-span chat style was characterized by a greater number of words per utterance [operationalized as carriage returns] on average than was exhibited by high-span students" (p. 48). The researchers propose "that the low-span students were taking advantage of the reduced cognitive burden introduced by the chatroom to produce more extensive and elaborate constructions; something they may have found difficult in a F2F setting" (p. 48). In terms of language development and transfer, the implication seems to be that what is transferring from chatting to speaking is an underlying communicative competence that develops through output, whether chatted or spoken (cf. Swain, 1985), and that chatting is especially beneficial for those who may otherwise find speaking difficult, such as the low-span students in this study. Payne and Ross cautiously add that "more fine-grained syntactic analysis of the chat comments would be required to verify this interpretation" (p. 48).

In contrast to the longer-term comparative studies that do relatively little to illustrate what content (e.g., communicative and linguistic features, dispositions associated with language use and acquisition, etc.) may actually transfer between chatting and speaking, mapping the shorter-term studies and anecdotal evidence on to Barnett & Ceci's (2002) taxonomy provides more detail about what actually transferred from one context to another.

As mentioned above, Abrams (2003a) found that students who chatted the day before an in-class oral discussion produced more discourse during that discussion than students who had not chatted. Abram's study does not provide sufficient data about the online interactions to make definitive claims regarding exactly what content may have transferred, but her findings point to the possibility of transfer of quantity of discourse, similar to those of Hirotani (2009, reviewed above). In terms of context, it is noteworthy that the topic of the chat was the same as the topic of the next day's oral discussion, and that whatever transfer Abrams did find occurred from one day to the next across social contexts that partially shared interlocutors: the chats consisted of small groups of classmates while the oral discussion included all classmates and the instructor.

Sykes' (2005) investigation of the impact of text-based chat on the development of pragmatic competence clearly illustrates that the content that transferred from chatting to speaking consisted of the specific speech acts of accepting and declining invitations that were first practiced in chat, and then performed orally. Contextually, the time lapse in Sykes' study between chatting and speaking (three days) was greater than that in Abrams' (2003a, one day). However, again there was substantial overlap in terms of the topic (invitations) and interlocutors: the same groups of students that chatted together performed their oral presentations together.

From Shamsudin and Nesi's (2006) investigation of chat in the instruction of English for engineering students, the strongest evidence of transfer is the oral assessment on which the treatment group outperformed the control group. This oral assessment consisted of a group project that required conducting needs assessment interviews with fictitious clients, and development meetings with classmates – tasks that were very similar to the chat-based tasks that the treatment group had completed earlier in the study. In terms of content that transferred, some students in the treatment group "claimed to have used the vocabulary and phrases that they had learned during the [prior chat-based] tasks" (p. 332). In terms of context, there was clearly a high degree of overlap between the topic of the chats and the subsequent oral assessment, but the authors are not explicit regarding the timeframe (at best it can be inferred that more than one week had passed), the physical setting, nor the social context (both chat and oral tasks included group interactions, but it is not clear if the interlocutors were the same or different).

The findings of Compton's (2002) exploration of transfer between chatting and speaking with international graduate students are quite consistent with those of Shamsudin and Nesi (2006). Again, the transferred content consisted of specific words and phrases that students used during oral presentations that they or their classmates had previously used during the immediately preceding chats. In terms of context, the very high-degree of overlap between that chats and the oral presentations is noteworthy: the topics of both were identical; only a matter of hours passed between the tasks; and the chat interlocutors formed part of the oral presentation audience. Additionally, Compton compared her transfer findings with the results of students surveys, and found this transfer to be more likely when students had expressed interest in the topic of the chats and presentations, and when they reported enjoying chatting with their specific interlocutor.

Turning now to more anecdotal evidence, Abrams' (2003b) study on flaming includes an example of transfer that is reminiscent of Sykes' (2005) finding of the transfer of specific speech acts. In Abrams' (2003b) study, a group of students that first engaged in playful teasing in German in the chatroom, spontaneously broke into similar teasing in German outloud right in the computer-lab during the chat session. This transferred content, the communicative function of teasing, took place across contexts that varied only in terms of modality, as the transfer took place in the same location, with the same interlocutors, and almost at the same time.

Additionally, Abrams (2003b) linked instances of flaming to camaraderie and interpersonal bonding. In this sense, when students teased one another orally after doing so in chat, perhaps what may have been transferring was some sort of mutual comfort, familiarity, or affinity that developed online and remained intact offline. This case may therefore indicate the type of transfer of dispositions investigated by researchers such as Carl Bereiter (1995) and Martin Packer (2001), who argue that what transfers most readily from one context to another are the dispositions and attitudes that an individual has embodied through experience (see also Bourdieu, 1977).

Anecdotes of transfer between chatting and speaking on longer timescales also point to the possibility that dispositions and attitudes can transfer. In Hudson and Bruckman's (2002) study on differences in the social dynamics between chatrooms and classrooms, one student reported, "[Now,] when I see some of the people outside of class, I'll say something in French to them. The friendships that were built though the chatroom has [sic] given me the confidence to speak more" (p. 129). Here what seems to have transferred are dispositions of greater confidence and mutual affinity developed through chatting with classmates, and remaining intact when communicating orally with those same classmates. Temporally, this transfer apparently took place over the course of the study, but socially it is noteworthy that disposition transferred in relation to specific interlocutors that first chatted and later spoke together. Similarly, in Beauvois' (1998b) study on the impact of chat on foreign language students' attitudes and motivation, students reported that they experienced increased confidence and self-assurance about using the target language not only while chatting, but also during oral communication in class. This change is presented as taking place over the course of a semester, and again seems to relate to interactions with the same interlocutors (i.e., classmates) both online and off.

Eva Lam's (2004) finding that her subjects, two Cantonese-speaking ESL students, improved with regard to both their confidence and fluency in English after spending extensive time chatting, also points to transfer of dispositions. Her subjects commented that chatting helped them develop the "habit" of using English without being overly concerned with making errors or being ridiculed for those errors (p. 51). The girls didn't necessarily think they spoke

better, but they definitely felt that they were willing to speak more (see also Abrams, 2003a; Hirotani, 2009 on transfer of quantity of discourse). Lam suggests that the adoption of a new online identity in relation to the target language "enable[d] the girls to develop a sense of fluency and confidence in speaking English that has to some extent been transferred to the local American context" (p.59). These students developed positive senses of themselves in relation to their target language through chat, and those dispositions seemed to carry over into the offline environment, facilitating oral use of the language (see also Lam, 2000). In terms of the context of this transfer, it is worth noting that Lam generally interviewed the two girls together, meaning there was some overlap of the interlocutors.

Finally, it is difficult to map the reports of Shin's (2006) subjects that chatting helped them prepare for face-to-face interactions onto Barnett & Ceci's (2002) taxonomy because no transfer was actually documented. Even so, it is noteworthy that these reports only came once the chats had taken on a distinctively academic nature, and in relation to using academic English on campus. Therefore, if this transfer did indeed take place, it occurred between contexts that may have shared topics, functional goals, and registers.

So far, all of the findings cited have related to transfer *from* chatting *to* speaking. Using the terminology of learning scientists Schwartz, Bransford, and Sears (2005), these studies consider "transfer out" from chat-based instruction without also considering "transfer in" of prior experiences and knowledge that may influence the way in which learners engage in foreign language chat. Steven Thorne's (2003) research on "cultures-of-use" in chat-based instruction of French at the university level is the only work I am aware of that considers "transfer in." Thorne found that students' previous experiences using CMC, both inside and outside of school, influenced the way they used CMC for class activities. For example, students with ample experience chatting tended to display extremely informal norms of interaction during chat-based activities (see also Lantolf & Thorne, 2006). Thorne's (2003) work suggests that students' individual relationships to chatting may result in different cultures-of-use, which in turn impact their engagement in chat-based activities, which would also impact what may transfer out of chat-based activities to subsequent speaking. Thorne therefore points at the possibility of transfer of communicative norms across contexts that share the chat medium.

In summarizing this review of existing evidence of transfer between chatting and speaking, it is clear that there is a substantial gap between the longer trajectories that are most commonly considered and the shorter trajectories on which there is more concrete evidence of transfer. In other words, while many researchers seem primarily concerned with the way in which chatting may transfer to speaking over the course of several weeks or, in many cases, a full quarter or semester, concrete evidence of transfer of linguistic constructions and communicative functions has only been demonstrated on timescales that are much shorter. To use Barnett and Ceci's (2002) terminology, there is much interest in "far transfer" between chatting and long-term oral language use across physical and social contexts, but much more evidence of "near transfer" between chatting and shortly following oral communication that takes place under similar contextual conditions. The primary exceptions to this trend are in the work of Lam (2004), Hudson and Bruckman (2002), and Beauvois (1998b) in which students self-reported developing dispositions through chat that facilitate comfort and confidence in subsequent face-to-face encounters, and in Hirotani's (2009) correlation regarding quantity of output. Finally, Thorne's (2003) work reminds us that a full understanding of transfer between chatting and speaking also involves considering what sort of communicative norms and practices learners transfer into chat-based instruction.

Explanations for transfer between chatting and speaking

My above review of empirical evidence of transfer between chatting and speaking clearly shows that there are a fair number of researchers investigating this phenomenon. Why, then, do prominent voices continue to call for more research in this area (Chun, 2008; Kern, 2006)? I believe a substantial reason for these continued calls is that despite the above cited attempts to show that this transfer occurs, there have been minimal attempts to actually explain it.

Indeed, only Payne and Whitney (2002) have proposed and investigated a concrete explanation for transfer between chatting and speaking. Drawing on Levelt's (1989) model of language production, Payne and Whitney suggest that the only differences between chatting and speaking relate to the musculature involved in the two forms of communication, and a decreased load on working memory in chat because it is not quite real-time and utterances remain visible. They hypothesize that this decreased load on working memory facilitates the cognitive processing that leads to automaticity and fluency. To test this hypothesis, Payne and Whitney evaluated their subjects for working memory, and individual results were compared with individual gains in oral proficiency. They found a significantly greater correlation between differences in working memory and differences in gains in oral proficiency in the control group than in the chat group. This finding suggests that chatting enabled individuals with lesser capacity to maintain phonological information in memory to overcome this shortcoming, apparently because of the decreased cognitive demands of chat. While Payne and Whitney's work represents only one attempt at providing empirical support for this explanation of transfer between chatting and speaking, the explanation has gained some traction in that it is sometimes cited by others investigating this transfer (C. Blake, 2009; Sykes, 2005). Sykes (2005) builds on this explanation by further suggesting that the facilitated processing of text-based chat becomes potentially synergistic when combined with oral processing of the same linguistic content.

This processing-based explanation is clearly a purely cognitive one that assumes all inputs and outputs impact language acquisition equally, independently of the contextual conditions of either language learning or subsequent use. It is an explanation that seems to assume an underlying, homogenous communicative competence that once sufficiently developed through context-independent inputs and outputs enables communication across varying situations and conditions (cf. Chomsky, 1965). As such, this explanation is well aligned with traditional, cognitivist views of transfer of learning that posit transfer as the result of sufficiently mastered abstract principles that enable recognition and appropriate application of concrete instantiations of these abstractions (e.g., Gick & Holyoak, 1983; Judd, 1908). Such an explanation ignores claims that one's ability to communicate effectively varies in different social situations, not only in second languages (e.g., Ellis, 1985; Tarone, 1983), but also in first languages (e.g., Bakhtin, 1986; Gee, 1996). It also challenges Swain's (1985) foundational interactionist claim that "one learns to speak by speaking" (p. 248).

From a sociocultural perspective, there is also a hint of technological determinism in an explanation of transfer between chatting and speaking that is based on the assumption that both forms of communication involve the same cognitive processes. Scribner and Cole (1978) argue that transfer can be expected between similar communicative practices, but they insist that communicative practices are defined less by mediational tools than by the way those tools are used to achieve socially defined communicative goals. Claiming similarity between chatting and speaking is to conceptualize each as monolithic communicative practices as opposed to viewing

them as media that can support a wide range of communicative goals. The word "chat" may still index informal oral communication, but it has also become a label that is broadly placed on all forms of synchronous, text-based CMC, whether the medium is being used for social interaction, academic assignments, or technical support. Technologically, chatting is a medium through which communication can take place more so than a communicative practice in and of itself. The same is true of speaking: we use this medium for a very wide range of situations, purposes, and genres (e.g., Bakhtin, 1986; Finnegan, 1988). From this perspective, transfer between chatting and speaking should be more dependent on potential similarities between the ways in which the two media may be used to achieve similar socially defined goals than on any supposed similarities between the media themselves.

As discussed earlier in this chapter, within the field of SLA, sociocultural theorists insist that mastery of communicative practices results from authentic participation in those actual practices. As such, it might make sense to consider that transfer between chatting and speaking may actually be an indirect relationship through which chatting may facilitate participation in subsequent oral communication. This line of reasoning is well aligned with the explanation of transfer between chatting and speaking that is implied by the work of Eva Lam (2000, 2004). Lam claims that through socialization into online target language communities, her subjects embodied dispositions that facilitated subsequent oral language use. Her subjects reported that they didn't necessarily feel that they spoke English better as a result of online chatting, but they became more motivated to use the language orally, and less concerned about making errors when doing so. Perhaps Abram's (2003a) finding that chatting led to students speaking more, but not necessarily better, also relates to this sort of embodiment of dispositions that support participation in oral communication.

However, there is a shortcoming to this dispositional explanation of transfer between chatting and speaking. Just as there are those who argue that communicative competence varies from one social situation to another, there are also those who argue that dispositions related to language use also vary in relation to contextual conditions (MacIntyre et al., 1998). MacIntyre et al.'s model of "willingness to communicate" posits that dispositions such as confidence, motivation, and perceived competence are not stable, but rather situational. One may feel quite confident in one's ability to use one's target language in some situations and with some interlocutors, but lack confidence in other situations or with other interlocutors. The relational, situational nature of dispositions doesn't necessarily mean that they can't transfer from one context to another, but it suggests that other contextual conditions must also be met for that transfer to take place. As an example, consider Hudson & Bruckman's (2002) subject who reported after a semester of chatting with classmates, "[Now,] when I see some of the people outside of class, I'll say something in French to them. The friendships that were built though the chatroom has given me the confidence to speak more" (p. 129). This student's statement supports the notion of dispositional transfer between chatting and speaking, but this disposition of increased confidence manifests itself in relation to specific interlocutors (i.e., the student's classmates), not necessarily as a fixed trait.

This idea of transfer between chatting and speaking as a somehow situational and relational phenomenon connects nicely to one more explanation that has been suggested, but not fully investigated, in prior research. Beauvois' (1997b) groundbreaking study on the impact of text-based chat on oral proficiency included qualitative analysis of chatlogs that led her to hypothesize that chatting enabled students to "[connect] affectively and intellectually," (p. 109) and that perhaps these interpersonal bonds transferred to offline class activities, facilitating oral

language use and development. Research on transfer from the learning sciences has not explicitly addressed the role of interpersonal relationships in transfer (although see e.g., Laboratory of Comparative Human Cognition, 1983; Spencer & Weisberg, 1986 on the role of contextual overlap, including the presence of the same people). However, Greeno and his colleagues (Greeno et al., 1993), building on Gibson's (1986) notion of affordances, argue that transfer is facilitated by affordances that span multiple contexts, stressing that an affordance is a relationship between an individual and his or her environment, not a static trait of the environment. These researchers do not address interpersonal relationships, but Gibson's (1986) original conceptualization of affordances does include relationships between people (p. 128). Following Greeno et al. (1993), it seems reasonable to suggest that interpersonal relationships that span multiple environments, such as the chatroom and the classroom, may support transfer of language use and its associated dispositions. This premise is also supported by the well replicated finding from research on computer-mediated communication that online communication plays an increasingly common role in the formation and maintenance of otherwise offline relationships (e.g., Baym, 2010; Cherny, 1999; Fung, 2006; Gibbs, Ellison, & Heino, 2006; Leander, 2008; Leander & Lewis, 2008; McKenna, Green, & Gleason, 2002; Parks & Floyd, 1996; Rheingold, 1995; Whitty, 2007).

While it is unlikely that all documented cases of transfer between chatting and speaking revolve around the formation of interpersonal relationships, it may be promising to consider an explanation that accounts for unique relationships between individual language learners and their idiosyncratic language learning experiences, contexts, and goals. If transfer between chatting and speaking does relate to similarities between the communicative practices that learners use in chatrooms and those that they subsequently use orally, as learning scientists Roy Pea (1987) and Jean Lave (1988) have argued, it is important to remember that those similarities are perceived by learners more so than they are given by nature. Randi Engle (2006) similarly posits that what matters most for transfer are learners' perceptions of connections between experiences across time, place, communities, and activities. Throughout this dissertation, I apply these relational explanations of transfer to my investigation of transfer between chatting and speaking in great part because they are well aligned with the ecological perspectives on SLA (e.g., Kramsch, 2002b) that inform my methodological and analytical approach presented in the next chapter.

Conclusion

Reviewing the existing research on transfer between chatting and speaking in foreign languages leaves more questions unanswered than answered. While experimental and quasi-experimental comparative studies provide the well replicated finding that chatting can transfer to speaking over the course of a term or semester, these studies fail to provide any concrete details regarding what exactly transfers, much less why or how. In fact, given the frequent absence of analysis of chatlogs, these studies don't even illustrate the phenomenon they claim to be empirically supporting. In contrast, a small number of shorter-term studies do provide some concrete evidence of transfer of specific linguistic items and communicative functions, although over relatively short periods of time, generally ranging from a few minutes to a few days (see Shamsudin & Nesi, 2006 as a possible exception). While these short-term results do a better job of illustrating transfer, they do nothing to suggest a relationship between short-term transfer and the longer trajectory of oral language development that is so coveted by both learners and

instructors. The existing research also includes promising anecdotes of transfer of dispositions and interpersonal relationships, but this type of transfer has been stumbled upon more so than investigated systematically.

Based on this review, I believe that one of the most pressing needs in this area of research is an attempt to illustrate transfer between chatting and speaking on the longer trajectory of a full course, term, or semester. We know what this transfer can look like in the short term, but don't know if this short-term transfer relates to longer trajectories of language development. And we have reason to believe that transfer can happen on longer trajectories, but don't know what it looks like in those cases. I believe that the first step towards producing findings that can actually inform pedagogical uses of CMC for SLA is to develop longer-term descriptions that provide greater specificity of what transfers under what circumstances. Only then will we be able to start to dive into the related question of how and why this phenomenon occurs.

Chapter Three
A multi-case investigation of transfer between chatting and speaking

As first presented in my introduction, my dissertation has two main goals: 1) to describe transfer between chatting and speaking in foreign language learning; and 2) to construct plausible explanations for this transfer. To pursue these goals, I conducted a multi-case study in beginning and intermediate Spanish language classes at a large public university in California. Data collection for this study took place during five semesters, three of which focused on single sections in which chat-based activities were integrated into required instruction, and the other two focused on optional online tutoring.

This chapter is divided into two main sections. The first presents my conceptualization of my dissertation research. Here I propose that transfer between chatting and speaking is best considered a "collateral transition" (Beach, 1999) and therefore best understood through concurrent qualitative investigation of both online and offline language use (Leander, 2008). In this first section I also explain my adoption of an ecological perspective (e.g. Kramsch, 2002b) and justify my multi-case approach (Yin, 2009).

The second half of this chapter deals with the actual details of conducting my study. Here I provide an overview of the who, what, where, and when of my data collection and analysis. My individual data chapters then include an additional level of case-specific details regarding data collection and analysis reported in those chapters.

Conceptualizing the study

In this section I outline my conceptualization of my dissertation study, specifying in theoretical terms what it is I am investigating, the perspective I adopt, and my overall research design. This section is further divided into three subsections for each of these three factors to be discussed. First, I position this research as an investigation of transfer of learning, but highlight specific characteristics of this particular transfer question that call for an alternative conceptualization than what has generally been used. Drawing on the work of Beach (1999) and Leander (2008), I define transfer between chatting and speaking as an online/offline collateral transition. Second, I explain the ecological perspective that I adopt in this investigation, stressing my focus on relationships between individuals and multiple components of their environments (Bateson, 1972; Bronfenbrenner, 1976; Gibson, 1986; Kramsch, 2002b). Third, I define this dissertation as a multi-case study with an embedded unit of analysis that enables me to compare and contrast manifestations of transfer between chatting and speaking across different scales (Yin, 2009).

An online/offline collateral transition

Transfer of learning is most typically investigated through experiments that involve a three part design: (1) an evaluation of a target activity in order to establish a baseline performance level; (2) engagement in a different activity that is hypothesized to impact performance of the target activity;[4] and (3) another evaluation of the target activity in order to

---

[4] Sometimes during this second part, different groups of subjects engage in different activities or treatments, including the possibility of a "control" group that does not engage in any treatment.

determine changes in performance (e.g., Engle et al., 2011; Thorndike & Woodworth, 1901). As an example, Figure 3.1 illustrates the timeline of a typical transfer experiment designed to investigate transfer between two activities, A and B.
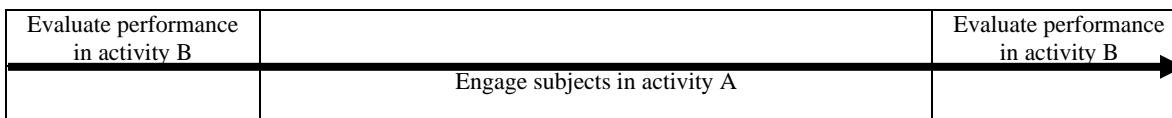
Evaluate performance in activity B		Evaluate performance in activity B
	Engage subjects in activity A	

Figure 3.1: Typical timeline of a transfer experiment

In this scenario, if a subject's performance in activity B improves from pre-test to post-test, it is reasonable to claim that the subject's engagement in activity A is at least partially responsible for that improvement, therefore indicating positive transfer from activity A to activity B. However, in order to make such a claim, it is crucial to the research design that the subject has not engaged in additional activities between the two evaluations of activity B that may also have influenced performance on the pre and post-evaluations. If the subject has engaged in multiple activities between evaluations, his or her improvements may not actually relate to activity A at all.

At first glance, the bulk of existing research on transfer between chatting and speaking (see previous chapter) follows this typical 3-part design: (1) subjects' oral performance is evaluated at the beginning of the study; (2) subjects engage in chatting during the study; and (3) subjects' oral performance is evaluated again at the end of the study. However, the reality is that in all of these studies, chatting was only one of multiple instructional activities in which subjects engaged between oral evaluations. Of special significance is the fact that in all of these studies, subjects also engaged in activities that involved speaking their target language, an activity that almost undoubtedly would have an impact on their oral language development (Swain, 1985). As such, the typical timeline of an investigation of transfer between chatting and speaking is better depicted by Figure 3.2, in which both speaking and chatting take place in parallel between oral assessments.
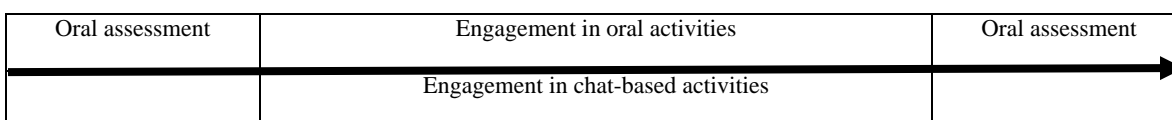
Oral assessment	Engagement in oral activities	Oral assessment
	Engagement in chat-based activities	

Figure 3.2: Typical timeline of studies on transfer between chatting and speaking.

King Beach (1999), a prominent developmental psychologist from a sociocultural tradition, uses the term "collateral transition" to refer to this specific type of transfer in which concurrent involvement in two (or more) activities contributes to a developmental outcome (p. 115). This construct emerged from his primarily ethnographic work involving extensive participant observation and interviewing of his subjects across the multiple settings in which concurrent activities took place. In an example that to some degree parallels the use of text based-chat in the work reviewed in the previous chapter, Beach discusses adults engaging in professional development activities while also working in the same professional field. He argues that, in such cases, improved performance of professional activities cannot be attributed solely to professional development efforts because continued on-the-job engagement also influences professional performance. At the same time, on-the-job experiences influence the ways in which individuals engage in professional development activities. Beach uses the term "collateral" to refer to this back-and-forth, multidirectional transfer as the two activities mutually influence one

27

another as they collectively influence overall development and performance. Beach's notion of collateral transition seems an especially apt conceptualization of transfer between chatting and speaking when students are engaging in both activities throughout a language course. I enter this investigation assuming that online and offline target language use collectively influence learning outcomes while mutually influencing one another.

Leander's (2008) review of research on online/offline literacy networks (e.g., Lam, 2004) provides methodological suggestions for my investigation of the collateral transition between chatting and speaking. Leander (2008) calls for "connective ethnography" that acknowledges the fluidity and interplay between online and offline interactions. This approach involves participant observation both online and off, and thus by nature calls for multi-site investigations (Bogdan & Biklen, 2007). However, Leander insists that this work must not treat these differently mediated interactions as if they take place in two neatly distinct research sites. Instead, the focus is on activities and social networks that span multiple media, not the media themselves. Baym (2006) further suggests that all research on computer-mediated interactions must address the fact that "[o]ffline contexts always permeate and influence online situations, and online situations and experiences always feed back into offline experience" (p. 86). From this perspective, understanding the relationship between chatting and speaking in foreign language instruction requires much more than experiments that compare before and after snapshots of oral performance, bridged by brief descriptions of the chat-based interventions in between. This research calls for qualitative studies that address "how meanings get taken up, shift, and circulate across different situations" (Bogdan & Biklen, 2007, p. 76). Understanding transfer between chatting and speaking requires a combination of extensive observation of learner interactions across media along with interviews with those learners in order to better understand their unique experiences using and learning their target language with peers in both chatrooms and classrooms.

An ecological perspective

Adopting an ecological perspective towards investigating transfer between chatting and speaking means viewing this transfer as a complex phenomenon that cannot be reduced to its individual components, but rather is better understood in terms of the relationships between those components (Kramsch, 2002a; Schram, 2006). This perspective is implicit in Beach's (1999) emphasis on the relational and heterochronous nature of collateral transitions. Beach calls for focusing on the changing relationships between a learner and the activities in which he or she engages rather than considering only the development of the learner in isolation from supposedly static contexts and activities. He adds that individuals and the activities in which they engage mutually influence one another, although often at different rates of change. My investigation between this particular collateral transition between chatting and speaking in foreign language learning additionally calls for the interdisciplinary approach associated with ecological perspectives (Kramsch, 2002a): my research sits at the cross section of SLA, CMC, and transfer-of-learning, and I draw heavily from all three bodies of knowledge. These multiple resonances have led me to incorporate into my research three concepts that are fundamental to an ecological perspective: affordances, framing, and multiscalarity.

The notion of affordances was first introduced by Gibson (1986) in his book *The Ecological Approach to Visual Perception* to refer to unique relationships between an agent and his or her environment. Gibson proposes that affordances are what agents perceive: what an

agent notices and attends to in an environment are not so much objective, physical features, but rather the possibilities for actions afforded by those features, possibilities that are unique to the agent's perspective, needs, and previous experiences. van Lier (2000), who is responsible for bringing this notion of affordances into SLA research, provides a useful illustration:

> In the forest, a leaf can offer very different affordances to different organisms. It can offer crawling on for a tree frog, cutting for an ant, food for a caterpillar, shade for a spider, medicine for a shaman, and so on. In all cases, the leaf is the same: its properties do not change; it is just that different properties are perceived and acted upon by different organisms. (p. 252)

The notion of affordances has also been brought into transfer research by Jim Greeno and his colleagues (Greeno et al., 1993) in their suggestion that transfer depends on affordances across situations that an agent perceives as supporting a given activity. I incorporate the notion of affordances in my investigation between transfer and speaking in assuming that this transfer results not simply from a combination of the medium, the task, the instructional goal, and other aspects of the instructional context, but from the unique relationships between a specific learner and these various aspects of the instructional context. Understanding these relationships requires extensive efforts to capture the perspectives of learners.

Framing is a construct perhaps most strongly associated with the work of Ervin Goffman (1974) and Deborah Tannen (1993b). However, this notion originates from the work of Gregory Bateson (1972) and is central to his book *Steps to an Ecology of Mind.* Bateson introduced the metaphor of a frame to describe the cues in a context that guide one's interpretation of that context, similar to the way a physical frame around a painting indicates to the viewer that what is inside the frame is to be looked at with a different set of intentions and expectations than the surrounding wall outside the frame (p. 187). Framing is a metacommunicative process through which information about the nature of interactions in a given context is established and communicated. This metacommunicative information is what guides interpretations of the relationships between interlocutors and the meanings of their behaviors and utterances (p. 178). While there are always multiple sources of framing in any given context (see Chapter 6), it is crucial to stress the role of communication itself. As Bateson explains:

> It is important to see [a] particular utterance or action as *part* of the ecological subsystem called context and not as the product or effect of what remains of the context after the piece which we want to explain has been cut out from it.
> (p. 338, emphasis original)

In other words, the content of what is said is part of the context in which it is said; every utterance contains metacommunicative information about the way the utterance should be interpreted. In my investigation of transfer between chatting and speaking, I use the notion of framing in considering the ways in which learners perceive and establish similarities and differences between their online and offline interactions. Prior research has demonstrated that when framing creates connections between contexts and activities, a phenomenon referred to as "intercontextuality" (e.g., Floriani, 1994; Gee & Green, 1998), transfer is more likely to occur (Engle, 2006; Engle et al., 2012; Engle et al., 2011).

Multiscalarity refers to the notion that a phenomenon occurs simultaneously on multiple scales. In his book *The Ecology of Human Development*, Urie Bronfenbrenner (1979) presents this idea through his notion of embedded contexts or systems. Using his terminology, my research entails the investigation of two microsystems – chatting and speaking – that form part of a larger mesosystem of a foreign language class, which in turn forms part of the exosystem of the

university, and so on. Jay Lemke (e.g., 2002) discusses multiscalarity in terms of development occurring on multiple timescales. According to Lemke, the development that a learner experiences over the course of a semester, for example, can be viewed not only as being comprised of shorter stretches of development, but also as comprising part of a longer trajectory that may have started long before the beginning of the semester, and may continue long into the learner's future. Following Kramsch (2002a), the *focal scale* of my research is the semester long trajectory of oral language development of individual students. Understanding this semester-long scale, however, requires micro-observation of the interactions that make-up and reflect this trajectory, as well as a consideration of learners' individual histories and future goals and plans. Conceptualizing transfer between chatting and speaking as a multiscalar phenomenon may enable me to illuminate relationships between this transfer on various timescales, potentially bridging the gap between prior research that has documented this transfer over very short (e.g., Compton, 2002) and much longer timeframes (e.g., Hirotani, 2009). Adopting a multiscalar view may also enable me to identity shorter-term episodes that serve as fractals for longer trajectories (Kramsch, 2002a; Larsen-Freeman, 1997).

A multi-case study

In his book *Case Study Research: Design and Methods*, Robert Yin (2009) details multiple justifications for the use of case studies that highlight the applicability of this approach to my investigation of transfer between chatting and speaking. According to Yin, "The most important [application of case studies in evaluation research] is to *explain* the presumed causal links in real-life interventions that are too complex for the survey or experimental strategies" (p. 19, emphasis original). As illustrated by my review of prior research (last chapter), experimental and quasi-experimental work does provide a fair amount of evidence that supports the presumption that chatting positively transfers to speaking, but there is almost no work that attempts to explain the mechanisms behind this transfer (cf. Payne & Ross, 2005; Payne & Whitney, 2002). Additionally, my ecological perspective assumes that transfer between chatting and speaking results from a complex system of interrelated factors that cannot be neatly operationalized into isolated variables. This scenario therefore calls for case studies that may do a better job of uncovering explanations of what actually happens between the pre- and post-assessments through which improvements in oral language use have been found.

Yin (2009) adds that case studies can "*describe* an intervention and the real-life context in which it occurred" as well as "*enlighten* those situations in which the intervention being evaluated has no clear, single set of outcomes" (p.20, emphasis original). These two applications are also well aligned with the goals of my investigation. My review of existing research validates critiques by Warschauer (2000) and Ortega (2009) that research on CMC for SLA often fails to fully consider the role of instructional context in shaping learning outcomes. This shortcoming is particularly true of work that focuses solely on pre/post assessments and attributes transfer between chatting and speaking to characteristics of the chat medium without explicitly addressing the specific conditions under which learners engage in chat. According to Yin (2009) case studies may be better fit for connecting specific transfer outcomes to the instructional contexts in which these outcomes occur. Furthermore, while my review shows a steady increase of evidence of transfer between chatting and speaking, it also reveals the high degree of variability in terms of specific manifestations of that transfer. The absence of any sort of singular outcome again calls for case studies that can describe a variety of outcomes while also

constructing explanations of some of the various factors and relationships that account for these outcomes.

This variability of transfer-related outcomes is also an important justification for taking a multi-case approach (Bogdan & Biklen, 2007; Yin, 2009). I enter this investigation assuming that different chat-based interventions will yield different manifestations of transfer for different students. I therefore need multiple cases if I am to capture and compare some of these multiple outcomes. Furthermore, a multi-case study also allows for the possibility of replicating findings (Yin, 2009). That is, while I assume outcomes will vary, through comparison of multiple cases I may also find phenomena that occur across cases, potentially supporting more generalizable explanations of transfer between chatting and speaking.

Finally, for this multi-case study I have chosen to use an embedded unit of analysis with the larger unit being the entire group of students that make up a class or participate in a tutoring project, and the subunit being an individual student (Yin, 2009). This embedded design enables me to construct detailed accounts of individual cases of transfer while also capturing patterns that emerge across larger groups of students. Additionally, combining an embedded design with a multi-case approach enables comparing, contrasting, and potentially replicating findings at the level of the individual student and the level of the group.

Conducting the study

The second half of this chapter is dedicated to outlining the actual nuts and bolts of conducting my dissertation research. This section provides an overview of all five semesters of data collection that comprise the study. Subsequent data chapters provide additional methodological details on the specific cases presented in those chapters.

Institutional context

This research took place in the Spanish department of a large public university in California. This institution was chosen primarily out of convenience: I had previously taught in the department and therefore was already familiar with the curriculum of the language program as well as several key members of the faculty and staff.

The Spanish language program in this department consists of four consecutive semester-long courses (Spanish 1 through 4). The textbooks and other instructional materials reflect the program's generally communicative approach guided by an interactionist perspective of SLA. The first year of the program (Spanish 1 and 2) is clearly characterized by the sort of interpersonal dialogue often associated with communicative approaches. During the second year (Spanish 3 and 4) the curriculum focuses much more heavily on communication around literary texts and analysis. Similarly, students' written assignments during the first year focus on personal narratives whereas in the second year there is a greater emphasis on argumentative essays. It is also worth noting that while all sections of any given course share the same syllabus and assessments, individual instructors do have some degree of autonomy to supplement the curriculum and implement their own teaching style.

All courses in the language program meet five times each week during 15-week semesters. These approximately 75 class sessions last 50 minutes each. For Spanish 1 and 2, enrollment is capped at 25 students per section. For Spanish 3 and 4 the cap is 20. Typically, classes start at these caps, and lose a small number of students over the semester. Given the

number of degrees at the university that include a language requirement, and the popularity of Spanish to fulfill that requirement, students in the first year of language program are generally representative of the greater undergraduate student body. In the second year, it is common for female students to outnumber male students.

Participants

Participants in my research were students enrolled in Spanish 2 or Spanish 3 courses between 2008 and 2011. These students were either enrolled in sections in which I was the instructor or researcher, or they had volunteered to participate in optional online tutoring sessions I offered during two semesters (a timeline of data collection is included below). Spanish 2 and 3 were chosen in order to best place my findings in dialogue with prior work because this beginning/intermediate level has often been the population investigated in research on transfer between chatting and speaking.

Through concurrent analysis during data collection, and through subsequent analyses leading to post-hoc interviews, a smaller number of focal students were identified as subjects for individual case studies. Focal students were selected based on three key criteria. First, they were students who participated quite actively in chat-based instruction, thus providing more data for analysis than students who participated less. Second, they were students who clearly displayed some forms of transfer between chatting and speaking, thus representing potentially revelatory cases of this phenomenon (Yin, 2009). Third, they were students who were willing to participate interviews either during or after the semester in which they engaged in chat-based instruction.

To a lesser degree, the instructors of these students – including myself – were also participants in my research. While none of the cases presented in this dissertation focus heavily on instructors (see however Mendelson, 2010), they were observed and interviewed, and entered into analysis of the instructional contexts in which transfer was documented. I include more on my own positionality as researcher/instructor/tutor below.

Settings

Data collection took place in a variety of settings within the larger institutional context of this Spanish department. While these different settings are, to some degree, characterized by physical spaces and communication media (e.g., classrooms, computer labs, chatrooms), I define them primarily in terms of their instructional configurations and activities. Defined in this way, I consider 6 settings, some of which are shown in the photos below:

1. *Classrooms during oral discussions of reading assignments (photo 1)*
   Spanish 2 and Spanish 3 classes in this department include regularly scheduled sessions on the syllabus dedicated to discussing reading assignments. In total approximately 12 class sessions are dedicated to these discussions each semester. These discussions, which span the full semester, provided ample opportunities to observe students orally sharing their ideas about texts, and improving their ability to do so. Observations of Spanish instructors in this setting provided data regarding the way in which these discussions were instructionally framed (Engle, 2006; Mendelson, 2010).
2. *Classrooms during individual oral presentations and evaluations (no photo)*
   Spanish 2 and 3 classes generally include 4 sessions dedicated to unrehearsed and semi-rehearsed oral presentations given in class. All courses in the language program include

an end-of-semester individual oral evaluation. These presentations and evaluations provided additional observations of oral language use that spanned the full semester.

3. *Online chatrooms used during required chat-based instruction (photo 2)*
During semesters in which data collection focused on a specific class (see data collection timeline below), the curriculum included 4 to 6 sessions that were dedicated to required chat-based activities. Logs from these activities were my primary source of chat data from those semesters. As seen in photo 2, these chat-based activities often took advantage of the chat's interface which allowed uploading and sharing images and other media files. Additional details on chat-based curriculum are included below.

4. *Computer labs used during chat-based instruction (photo 3)*
The 4 to 6 sessions of required chat-based instruction just mentioned as Setting 3 took place in on-campus computer labs. Observing this setting often helped with analysis of chat logs from these activities.

5. *Computer labs during oral discussions of reading assignments (photo 4)*
Some of the sessions dedicated to chat-based activities also included a short oral discussion in the computer lab right after the chat. These discussions, in addition to providing more oral data, were central to my investigation of immediate transfer between chatting and speaking (on a timescale of minutes).

6. *Online chatrooms used during optional online tutoring outside of class (no photo)*
During the two semesters in which I offered optional online tutoring, we used the same chat interface as the one used for on-campus chat activities. However, because the social configuration and instructional framing during online tutoring were quite different from required chat-based instruction, I consider these virtual chatrooms to be a different setting. Logs from these chats provided an abundance of chat data from a smaller number of students engaged in much less explicitly structured activities.[5]
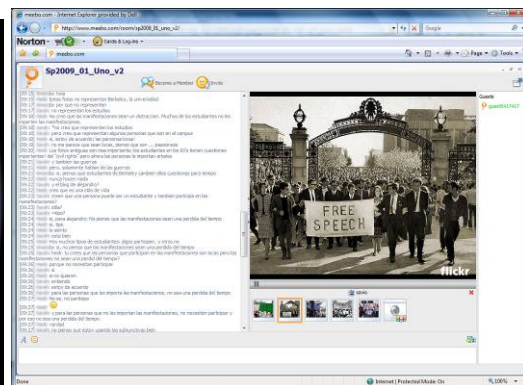

Photo 1: Reading discussion in class

Photo 2: Chatroom during on campus activity

---

[5] Ideally I would have also collected data in a seventh, and potentially eighth setting. During my two semesters of online tutoring, I did not ask any of my participants to either record themselves or keep notes of their offline actions while chatting. I therefore know almost nothing about their physical context or simultaneous activities. Similarly, I did not ask any participants to record or keep records of their use of Spanish outside of class. In some cases students did share pertinent experiences with me, but I was not systematically collecting data in any off-campus, offline setting.

Photo 3: Chat activity in computer lab   Photo 4: Reading discussion in computer lab

Chat-based curriculum

The chat-based instruction that was used over my five semesters of data collection can be roughly categorized into four different types of activities: two different types used during required, computer-lab sessions, and two different configurations of optional online tutoring. Each of these activity types is described in this section.

All activities were designed for use with free, password protected chatrooms provided by Meebo.com. As mentioned above, these chatrooms allowed displaying shared photographs and other media files.

I was the primary designer of these activities, although I collaborated heavily with another instructor during the spring semester of 2009 (Mendelson, 2009, 2010). The two of us adopted a design-based approach (e.g., Design-Based Research Collective, 2003) in which our evaluation of each activity greatly informed the design of our subsequent activities while also illuminating potential best practices. In subsequent semesters I maintained this approach as I continued to use and modify some of the activities that we initially designed that semester.

Computer-lab activities

During semesters in which data collection focused on a specific class, all chat-based instruction was required and took place in on-campus computer labs during 50 minute class sessions. Two general types of activities were used.

- One type of activity adopted a functional and task-based approach in which groups of 3-4 students used chats to discuss and prepare a response to the blog posts and accompanying photographs of a fictitious character. These activities required students to use specific linguistic forms for specific communicative functions. The chat portion of these activities lasted approximately 25 minutes with students using the remainder of the session to collaboratively compose and post their responses to the blog (see Mendelson, 2009 for a detailed description of one of these activities).
- The second type of activity focused on discussing course readings and were designed to facilitate and capture immediate transfer between chatting and speaking (cf. Compton, 2002). Students were assigned to read a text the day before meeting in the computer lab. In groups of 3-4 they then discussed the readings in chat for approximately 25 minutes, guided by instructor-provided questions. For the remainder of the session, the whole class, guided by the instructor, then discussed the readings orally in the computer lab (see Chapters 5 and 6 for detailed descriptions of these activities).

Online tutoring

During the two semesters in which I offered online tutoring, chat-based instruction was less rigidly structured than during computer lab activities, and attempted to adapt to the specific needs of those students who chose to participate. Online tutoring consisted primarily of tutor-facilitated discussion, although the topics of those discussions were quite different from one semester to the next.

- During my first iteration of online tutoring (spring 2008) chats were based on topics and activities from the course textbook. These included primarily communicative activities that provided opportunities for students to communicate informally and socially about their personal interests and experiences. Chats met for 1 hour on a regular twice-weekly schedule over the course of a 15-week semester and were generally attended by 4-5 students. Additional details about these chats are included in Chapter 4.
- During my second iteration of online tutoring (fall 2010) chats focused on discussing course readings, all of which were short excerpts or short pieces of Spanish and Latin American literature. Chats were scheduled to coincide with assigned readings, and took place at irregular intervals 10 times over the course of a semester. They lasted 1 hour and were generally attended by 3-4 students. Additional details about these chats are included in Chapter 6.

Data collection

The bulk of my data collection was qualitative and observational in settings in which I was also an active participant. During semesters in which I was the instructor, because my participation in that role took precedence over my role as an observer, I depended heavily on audio and video recordings that enabled retrospective observation of my own class. Additionally, I used interviews and surveys to solicit responses from research participants. Here I include a complete list of all forms of data collection used over my entire dissertation study. My data chapters include more detailed descriptions of the specific forms of data collection used for specific cases reported in those chapters.

- *Participant-observation in classrooms and computer labs.* My roles ranged from instructing the class to silently observing while jotting notes.
- *Fieldnotes from these settings.* When data collection took place in the classrooms of other instructors, I wrote detailed ethnographic fieldnotes based on copious onsite jottings (Emerson, Fretz, & Shaw, 1995). When I collected data in my own classes, fieldnotes were less robust, at times limited to daily seating charts, tracking student participation during oral activities, and writing reflections on specific instances that caught my attention.
- *Audio and video recordings from these settings.* Recording was done with a single, stationary video camera with a wide angle lens, and/or one or two stationary audio recorders. Only class sessions described above in my Settings section were recorded.
- *Participant-observation in chat-based activities.* My roles ranged from leading online tutoring sessions to popping in on student chats during computer-lab activities. In

35

general, I was more of a participant during online tutoring and more of an observer in the computer lab.

- *Fieldnotes from these activities*. During online tutoring, I wrote a reflection after every session. For computer-lab activities, I have the fieldnotes described above.
- *Downloading logs from all chat-based activities*. Logs were either downloaded from the server after activities or sometimes copied and pasted directly to text files.
- *Interviews with students and instructors*. Interviews were generally either semi-structured around open-ended questions about observed phenomena (Bogdan & Biklen, 2007), or involved stimulated recall (Gass & Mackey, 2000), in which students were asked to comment on their own language data.
- *Student surveys*. At the beginning of semesters, surveys captured data on language learning goals and experiences, previous experience chatting, and familiarity with classmates. After all computer-lab activities, students completed brief, anonymous evaluations that combined likert-style and open-ended questions. At the end of some semesters, students completed surveys about their experiences with chatting in class, again through a combination of likert-style and open-ended questions. In some cases survey items were based on individual student comments from interviews (see Mendelson, 2010).

Data collection timeline

Table 3.1 (next page) presents basic information about the five different semesters of data collection that comprise my dissertation study. I highlight that the first and last semesters (spring 2008 and fall 2010) focused on optional, online tutoring while the other three semesters focused on an individual section that engaged in required chat-based activities in a computer lab. It is also noteworthy that spring 2008 only included data collection in the online environment – no oral language data was collected during this initial investigation. Finally, while observations of both online and offline language use were completed in fall of 2010, I continued to conduct post-hoc interviews with focal students during the spring semester of 2011.

Table 3.1: Data collection timeline

Time period	Settings	Participants	Data
Spring 2008	Chatrooms during online tutoring.	Approximately 10 Spanish 2 students from various sections; some were my former students. Included Xiao (Chapter Four).	Chat logs; interviews; surveys.
Spring 2009	Classrooms during oral presentations and reading discussions; computer labs during chat-based instruction and reading discussions; chatrooms during chat-based instruction.	A single section of Spanish 2 for which I was not the instructor	Fieldnotes; audio and video of oral presentations and reading discussions; chat logs; audio and video of chat-based instruction in computer labs; interviews; surveys.
Fall 2009 & Spring 2010	Classrooms during oral discussions, presentations and exams; computer labs during chat-based instruction; chatrooms during chat-based instruction.	Fall: my section of Spanish 3. Included Elizabeth (Chapter Five). Spring: my section of Spanish 2.	Partial fieldnotes; audio and video of oral presentations and reading discussions; audio of oral exams; chat logs; audio and video of chat-based instruction in computer labs; surveys.
Fall 2010	Classrooms during oral reading discussions; chatrooms during online tutoring.	Approximately 10 Spanish 3 students from various sections.	Fieldnotes; audio of oral reading discussions; chat logs; interviews; surveys.
Spring 2011-	NA	Former students and online tutoring participants.	Interviews; surveys.

Analysis

The overarching goal of analysis was to describe and begin to explain cases of transfer on multiple scales. Pursuing this goal meant adopting different analytical tools depending on the specific case and scale. As such, each of my data chapters includes greater detail on the exact analytical approach used for the cases presented in those chapters. In this section I provide a more general overview of my approach, represented in Figure 3.3.
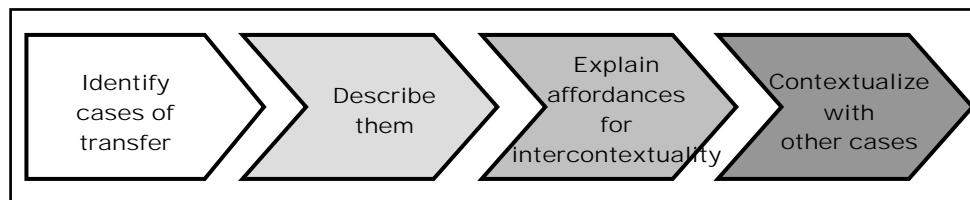

Figure 3.3: Analytical approach

Identifying cases of transfer between chatting and speaking relied primarily on analysis of observational data (fieldnotes, oral transcriptions, chat logs), although there were also cases that I did not observe but were reported to me by students (see especially Chapter 4). On shorter

timescales, transfer of specific ideas and linguistic items and structures were easily identified through comparative analysis of oral transcriptions and chat logs. For example, it was quite common to see in transcriptions of oral discussions examples of students using the same words to express the same ideas that they had previously articulated in chat, either earlier during the same computer lab session, or the night before during online tutoring.

On longer timescales (e.g., a full semester), identifying transfer between chatting and speaking started with the identification of some sort of change in oral language use (e.g., increased output, improved grammaticality), and then looked for antecedents to that change (or parallel changes) in chat logs (see Chapter 5). This analysis was generally guided by Herring's (2004) suggestions for computer-mediated discourse analysis. This is a code-and-count technique of content analysis that depends on additional discourse analytical tools for operationalizing constructs, involves interviews with subjects for validating subjective coding, and sometimes includes statistical analyses (see also Chi, 1997 on quantifying qualitative data). In each of my data chapters I provide further specification of the discourse analytical tools used.

Describing cases of transfer between chatting and speaking was a process of constructing robust narratives that attempted to illustrate exactly what had transferred between chatting and speaking, and under what specific circumstances. Building these narratives involved detailed analyses of segments of chat logs and oral transcriptions that served as fractals of greater trajectories (Kramsch, 2002a; Larsen-Freeman, 1997) as well as statistical analyses of coded data in order to create graphical representations of such trajectories (Chi, 1997). These descriptions also drew on interview and survey data in order to triangulate my observational data with students' perceptions and memories of what transferred and under what circumstances.

Constructing initial **explanations** for my documented cases of transfer between chatting and speaking was a process of investigating potential *affordances for intercontextuality* in each case. As explained above, by "affordances" I refer to idiosyncratic relationships between an individual and his or her environment (Gibson, 1986). By "intercontextuality" I refer to perceived similarities between contexts (e.g., Engle, 2006). This analysis continued to entail discourse analysis of observational data for references to connections between different contexts (see especially Engle, 2006; Engle et al., 2011; Gee & Green, 1998). Additionally, it depended heavily on interviews with students, both semi-structured and stimulated recall, in order to capture their perceptions of relationships between contexts.

Finally, **contextualizing** cases of transfer between chatting and speaking was a process of analyzing cases in relation to one another and in relation to patterns that spanned multiple cases (see Chapter 6).. This analysis compared and contrasted cases on the same scale (e.g., two individual cases) and across scales (e.g., an individual case in relation to a whole class). This contextualization helped identify and distinguish more general phenomena from more idiosyncratic experiences.

My position as researcher

Participant-observation always entails the dilemma of trying to objectively document a phenomenon as an outsider while simultaneously understanding the subjective meanings of that phenomenon that may only be salient to insiders (Bogdan & Biklen, 2007). In the case of teacher-researchers, things can be further complicated not only because the daily demands of teaching can make it close to impossible to step back and observe the bigger picture, but also

because the teacher has an inherent interest in shaping the outcomes in his or her class such that the very notion of objectivity becomes questionable at best.

This second issue, that of the teacher's role in shaping the outcomes he or she observes, was very salient in my dissertation study. While it is true that I collected data in a department in which I had already taught, it is just as true that I initially pursued opportunities to teach in this department because I had identified it as an appropriate context for my data collection. In fact, during my first year of doctoral studies, as I explained some of my initial thoughts on investigating chat-based instruction to Rick Kern, he helped me understand that to conduct this investigation I first needed to develop a strong relationship with a Spanish department and learn its curriculum in order to ensure that my pedagogical innovations would be appropriate and accepted. This dissertation is less the product of a teacher investigating a naturally occurring phenomenon in his or her own practice than the product of a researcher who pursued teaching positions in order to gain access to an appropriate research site.

Furthermore, before I began teaching and later collecting data in this department, I had already started scouring existing literature for research on transfer between chatting and speaking. I therefore already had some ideas about how this transfer might manifest itself and what sort of chat-based instruction might facilitate it. I further developed these ideas with each semester that I taught, collected data, or did both. By later rounds of data collection, when I had already begun to share my ideas and findings through conferences and publications, I also shared my research with my own students, in part to justify the required chat-based activities I integrated into my (and their) classes.

It would be fair to say that throughout my dissertation study I made a concerted effort to design chat-based instruction that would produce the very outcome that I was investigating. If the goal of my dissertation were to prove a causal effect of chatting on speaking (see Chun, 2008), my approach would have been problematic to say the least: I was clearly manipulating my research setting in order to influence my findings. However, my research never set out to investigate whether or not transfer between chatting and speaking occurred. My review of prior research and then initial findings had already convinced me that it occurred, at least some of the time under some circumstances. Instead, the goal of my research was to describe the phenomenon in an attempt to better understand it and attempt to explain it. Given this goal, designing for transfer, and even sharing my expectation of it with my students, was not only appropriate, but perhaps even necessary. I needed to facilitate manifestations of the phenomenon I was investigating if I were to have any chance to describe it, let alone explain it. To this end, while I employed primarily qualitative, and sometimes even ethnographic data collection techniques, I was also clearly adopting a design-based approach (Design-Based Research Collective, 2003). Through multiple iterations of design, evaluation, and redesign, I got better and better at facilitating at least some manifestations of transfer between chatting and speaking as I learned more and more about the phenomenon.

Chapter Four
A Spanish speaker and a friend: Identity transformation in foreign language chat

I open the empirical portion of my dissertation with a case that emerged from my initial round of data collection, an online tutoring project conducted in the spring semester of 2008. This initial investigation focused exclusively on online interactions, a decision justified by the idea that if some sort of learning or development can transfer from chatting to speaking, there must be signs of that learning or development in the chat environment (Bransford et al., 2000). The goal of this study was therefore to track longitudinal change over a series of foreign language chats in order to identify changes that might potentially transfer to oral communication.

Influenced by Eva Lam's (2000, 2004) proposition that learners' online identities as productive L2 users can transfer offline, my analysis initially focused on language learner identity in relation to target language use. Indeed, chatlogs from this project revealed a positive transformation of a focal student's online identity as a learner and user of Spanish. Xiao[6] went from presenting himself as a critical student and inadequate speaker to regularly reporting speaking Spanish with his classmates both inside and outside of class. Noticeably intertwined with his online identity transformation was evidence of a strengthening friendship with a classmate, Anthony. Xiao's steadily increasing reports of speaking Spanish in multiple settings, and especially those that involved Anthony, pointed to the possible role of interpersonal relationships as a relevant factor in transfer between online and offline language use. Aspects of Xiao's online identity did seem to transfer offline, but they did so in relation to specific interlocutors with whom he interacted across media.

Exploring online identities in second language acquisition (SLA) represents a rich cross-section of popular research topics such as language and identity, identity and SLA, computer-assisted language learning, and computer-mediated communication (CMC). Lam's (2000, 2004) groundbreaking work in this area has already provided compelling stories of the ways in which ESL students who felt marginalized in their classrooms were able to construct and adopt positive identities as learners and users of English in text-based virtual environments. Furthermore, Lam claims that aspects of these online identities transferred offline, including an increased willingness to speak the language (Lam, 2000) and increased oral fluency when doing so (Lam, 2004).

The illustrations of transfer in Lam's work provide an interesting complement to experimental and quasi-experimental studies that have found the use of text-based synchronous CMC (i.e., chat) in foreign language instruction to promote the development of oral proficiency (e.g., Abrams, 2003a; Beauvois, 1997b; C. Blake, 2009; Payne & Whitney, 2002; Satar & Özdener, 2008; Sykes, 2005). While these studies have documented oral gains through pre and post evaluations, they do little to illustrate or explain the phenomenon of transfer between chatting and speaking. Lam's rich ethnographic case studies point to one possible explanation: that the construction and adoption of positive online identities may support language learners' oral language use and development.

The study presented in this chapter uses the propositions that emerge from Lam's (2000, 2004) work to explore the online identities of foreign language students at the university level. This exploration is further guided by incorporating new conceptualizations of online identities as linked to offline relationships (e.g., Baym, 2010), as well as research on transfer of learning that

---

[6] All names, other than my own, are pseudonyms.

adopts an ecological, relational perspective (e.g., Greeno et al., 1993). The result of this study is a case of transfer between chatting and speaking in which a strengthening friendship between classmates served as a bridge between online and offline target language use.

Online L2 Identity and Offline L2 Use

Of the small but growing body of research on the online identities of language learners, Lam's (2000) TESOL Quarterly contribution, *L2 Literacy and the Design of the Self: A Case Study of a Teenager Writing on the Internet*, already has the distinction of being labeled a "classic of its kind" (Beavis, 2008, p. 1225). In this piece, Lam describes an ESL student who, through maintaining a fansite dedicated to a Japanese pop singer and regularly communicating online with fellow fans, created an online identity as an increasingly competent and confident English language learner and user. His experience contributed to an overall change in his perceptions of himself in relation to his target language: "from a sense of alienation from the English language in his adopted country to a newfound sense of expressivity and solidarity when communicating in English" (Lam, 2000, p.468). Combining Goffman's (1959) dramaturgical approach and critical discourse analysis (e.g. Fairclough, 2001), Lam showed that her focal student's positive perceptions of himself were consistent with the online identities he performed through the text of his website and the logs of his online communications. These positive perceptions were also accompanied by improved written expression in his classes and an increased willingness to engage in oral communication.

Lam followed this study with another about two female ESL students who regularly participated in a Cantonese-English bilingual chat (Lam, 2004). She claims that through a "mixed-code variety of English" (p.45, see also Danet & Herring, 2007) these girls took part in the collective construction and adoption of a new identity that enabled them "to develop a sense of fluency and confidence in speaking English that has to some extent been transferred to the local American context" (p.59). As one of these girls explained:

> After you've been going to the chat room for a while, you get used to talking, and you spend more time on it and feel more open about it. Even though you may not feel as comfortable speaking in other places, you get into the habit. It's like as you become more open, you feel it's no big deal, and I can talk to you a bit more. (p. 51)

Together, these two studies by Lam support two propositions about the online identities of language learners. First, in online environments, language learners can potentially present themselves more positively than they might be perceived, or perceive themselves, in face-to-face situations. Second, aspects of these online identities can potentially transfer offline, facilitating oral use of the target language.

The first of these two propositions is supported by other research on online identities in SLA. Some claim that CMC can be empowering for immigrant students by providing opportunities for egalitarian communication in the target language that might otherwise be denied both inside and outside classrooms (Spiliotopoulos & Carey, 2005; Warschauer, 2000). In extreme cases, ESL students have been found to be able to "assume the role of native or near-native speakers" in online, text-based communication (Spiliotopoulos & Carey, 2005, p. 93), side-stepping the gate-keeping that might block participation in analogous face-to-face (F2F) situations (e.g. Norton, 2000). Similarly, foreign language students labeled as shy or inhibited in the classroom have been found to present much more outgoing personalities through text-based chat (Beauvois, 1998b; Hudson & Bruckman, 2002). In a study of EFL students in a Japanese

university, CMC tasks were found to make status differentials between first and second year students less salient than in F2F tasks, facilitating the language production of the first years (Freiermuth & Jarrell, 2006).

Claims that language learners' online identities embody greater confidence and willingness to use their target languages resonate with positive findings regarding CMC and attitudinal, motivational, and affective factors believed to influence language acquisition. Findings include improvements in motivation (Beauvois, 1998b; Coniam & Wong, 2004; Kern, 1995; Spiliotopoulos & Carey, 2005; Ushida, 2005), confidence (Beauvois, 1998b; Compton, 2002, 2004; Hudson & Bruckman, 2002; Spiliotopoulos & Carey, 2005), willingness to communicate (Compton, 2002, 2004; Freiermuth & Jarrell, 2006), learner attitudes (Ushida, 2005; Warschauer, 1996), and "self-image as a speaker" (Thorne, 2003, p. 57). Similarly, there are findings of decreases in anxiety (Compton, 2002, 2004; Satar & Özdener, 2008; Ushida, 2005) and communication apprehension (Arnold, 2007).

With regard to the second proposition suggested by Lam's work, that language learner's more positive online identities can transfer offline, there is less empirical evidence, but strong theoretical support. Influential theorists have proposed that individuals can eventually become what that they initially only pretended to be. Vygotsky (1978) argues that when children take on imaginary roles during play, they behave "beyond [their] average age, above [their] daily behavior" (p.102) and that "[their] greatest achievements are possible in play, achievements that tomorrow will become [their] basic level of real action" (p.100). One illustration of this claim is the way in which in many cultures small girls play with dolls, pretending to be mothers as preparation for one day becoming mothers. Goffman (1959) takes a similar stance in his argument that performances that start as "cynical" can become "sincere" over time (p. 20). He gives multiple examples of individuals that slowly take on the traits of what started as an intentionally performed character.

In terms of online identities, Turkle's (1995) psychoanalytical approach to investigating identity play in MUDs led her to propose that "A MUD can become a context for discovering who one is and wishes to be" (p. 184). She goes on to argue that we can potentially better "our real-life selves" (p. 180) by learning to be more like our online identities. Gee's (2003) research on video games led him to a similar conclusion. He suggests that through continued experiences as one's virtual identity, one "comes to know that he or she has the *capacity*, at some level, to take on the virtual identity as a real world identity" (p.66, emphasis original).

From the perspective of the learning sciences, this notion that the characteristics of one's online identities can transfer offline is best aligned with dispositional views of transfer of learning. The goal of research on transfer is "to understand how learning to participate in an activity in one situation can influence (positively or negatively) one's ability to participate in another activity in a different situation" (Greeno et al., 1993, p. 100). Researchers Carl Bereiter (1995) and Martin Packer (2001) propose that what transfers from one context to another are attitudes, values, and dispositions of body and mind that have been fully embodied through repeated experience (cf. Bourdieu, 1977 on the notion of habitus). This perspective is well aligned with Lam's (2004) subjects' reports that their repeated experiences chatting in English enabled them to develop the "habit" of using the language, and this habit remained intact during face-to-face situations (p. 51). Cherny's (1999) research on MUDs yields a similar example in which users reported that in offline situations they found themselves trying to reproduce jokes and routines they had become accustomed to online.

Underlying the premise that language learners can create alternate identities online and then transfer aspects of those identities to their "real" selves is an assumption that the rules governing self-presentation are fundamentally different online and offline. Pioneering research on virtual environments gave weight to this assumption by illustrating the ease with which individuals managed multiple and often fantastical online identities (Rheingold, 1993; Turkle, 1995). The medium's facility for enabling users to present themselves selectively (Walther, 1996) led some to refer to it as a "great equalizer" because "how people look or what their cultural, ethnic, or social background is become irrelevant factors" (Palloff & Pratt, 1999, p. 15).

Not all early research on online identities, however, supports this assumption. Baym (1995, 2000) found that in an online community of soap opera fans, users went by their real names and disclosed their offline experiences in relation to the shows. She points out that much of the early research that highlighted fantastical identity play took place in game-based environments that valued that sort of play (e.g., Turkle, 1995). Baym's (2010) continued research has led her to conclude that online self-presentation is generally more honest than not, and that social norms have a greater influence on self-presentation than medium.

The premise that language learners can create alternate identities online is further complicated by findings that every online community uses a potentially unique set of communicative norms (e.g., Baym, 1995; Cherny, 1999; Donath, 1998) such that "interlopers are likely to stand out" (Crystal, 2006, p. 172). Hudson and Bruckman (2002) found that some native speakers were hostile and impatient with foreign language learners in public chatrooms. Thorne (as reported in Lantolf & Thorne, 2006) found that during online foreign language activities, students with more prior experience communicating online showed harsh and dismissive behavior to their more novice classmates. It seems then that online identities are limited by a combination of socially-valued communicative norms and a given individual's mastery of the semiotic and linguistic resources through which those norms are enacted (Baym, 2010; see also Blommaert, 2005).

Furthermore, online identities are increasingly conceptualized as intimately linked to offline relationships as so many online interactions take place between interlocutors that also interact in person (e.g., Baym, 2010; boyd, 2007; Leander, 2008; Mitchell, 2003). boyd (2007) argues that individuals attempt to present themselves online according to the expectations of their offline peers. Baym (2010) adds, "To the extent online self-representations are grounded in explicit connections with identifiable others...it is difficult to create online selves that wander too far from the embodied ones" (p. 115).

A related finding is that online communication plays an increasingly fundamental role in the development and maintenance of offline interpersonal relationships (e.g., Baym, 2010; Fung, 2006; Leander, 2008; Leander & Lewis, 2008). In reviewing work on online literacy networks, Leander (2008) highlights that "youth routinely remarked that they would not have their particular set of offline friends without the opportunities to meet and develop relationships online" (p. 52). Similarly, Fung's (2006) investigation of online gamers led him to conclude that "Cyberlife has evolved into a vital part of the real life to the extent that real social relationships have become inseparable with cyberlife" (p. 131-2).

It seems then that understanding the online identities of language learners and how they might transfer offline calls for considering the interpersonal relationships that learners develop and/or maintain through online interactions, especially when those interactions take place between classmates that also interact in person. This entanglement of online identity and relationship development has not been explicitly addressed by research on CMC and SLA, but a

small number of studies include anecdotes that touch on the phenomenon. Specifically, students have reported that online interactions helped them express themselves more freely and get to know their classmates better, increasing their comfort and motivation to speak to them in the target language (Beauvois, 1998b; Hudson & Bruckman, 2002; Spiliotopoulos & Carey, 2005). Hudson & Bruckman (2002) quote a student as saying, "[Now,] when I see some of the people outside of class, I'll say something in French to them. The friendships that were built though the chatroom has given me the confidence to speak more" (p. 129). This student's statement supports the notion of dispositional transfer between chatting and speaking, but this disposition of increased confidence manifests itself in relation to specific interlocutors, not necessarily as a fixed trait (see MacIntyre et al., 1998 on willingness to communicate as situational and relational). In fact, this disposition may be tied to the student's identity as a friend at least as much as to his or her identity as a language learner.

While Lam's (2000, 2004) work suggests identity and dispositions as mediating transfer between chatting and speaking, Beauvois (1997b) has suggested interpersonal relationships as a mediator. In her groundbreaking study on the impact of text-based chat on oral proficiency, her qualitative analysis of chatlogs led her to hypothesize that chatting enabled students to "[connect] affectively and intellectually," (p. 109) and that perhaps these interpersonal bonds transferred to offline class activities, facilitating oral language use and development. Thorne and Payne (2005) lend weight to this possibility by reporting that "embedding the learning of a foreign language in the larger context of significant relationship development has demonstrated considerable positive effects" (p. 376). The studies they review link relationship development to improved pragmatic and grammatical competence. If relationship development has proven beneficial here, why not in the case of oral performance as well?

Research on transfer from the learning sciences has not explicitly addressed the role of interpersonal relationships in transfer (although see e.g., Laboratory of Comparative Human Cognition, 1983; Spencer & Weisberg, 1986 on the role of contextual overlap, including the presence of the same people). However, Greeno and his colleagues (Greeno et al., 1993), building on Gibson's (1986) notion of affordances, argue that transfer is facilitated by affordances that span multiple contexts, stressing that an affordance is a relationship between an individual and his or her environment, not a static trait of the environment. These researchers do not address interpersonal relationships, but Gibson's (1986) original conceptualization of affordances does include relationships between people (p. 128). Following Greeno et al. (1993), it seems reasonable to suggest that interpersonal relationships that span multiple environments, such as the chatroom and the classroom, may support transfer of language use and its associated dispositions.

Analytical framework

Here I present the analytical frameworks I used for investigating identity and friendship in the chatlogs from this online tutoring project.

Identity

My approach to analyzing online identities can be summarized as a view of *identity as performance of local metapragmatic models on multiple timescales through language*. Here I unpack this summary:

Identity as performance... Goffman's (1959) dramaturgical approach has been popular in research on CMC (e.g. Bargh, McKenna, & Fitzsimons, 2002; Donath, 1998; Ellison, Heino, & Gibbs, 2006; Walther, 1996) and CMC in SLA (Hudson & Bruckman, 2002; Lam, 2000), probably because it resonates strongly with many assumptions about online identities. According to Goffman, in our everyday interactions we perform "fronts" of how we hope to be perceived, attempting to give certain impressions while trying to avoid inadvertently giving off others that might reveal us as imposters. In text-based CMC, the distance between the performer and the front is accentuated because electronic mediation separates the person at the computer from his or her performance on the screen. An assumption that this distance provides greater control over one's performances lends weight to claims that CMC facilitates selective and idealized presentations of oneself (Bargh et al., 2002; Walther, 1996).

...of local metapramatic models... The notion of identity as performance does not mean that one has full agency to be whoever one wants to be. Performances are limited to the range of fronts that will be recognized by the audience (e.g., Blommaert, 2005; Goffman, 1959). Goffman uses the term "social front" to refer to shared interpretations of idealized categories of people that constrain the way in which individual performances are perceived. Wortham (2006) refers to these shared interpretations as "metapragmatic models," emphasizing a semiotic approach in which one's observed behaviors are understood because they index shared "model[s] of recognizable kinds of people…participating in a recognizable kind of interaction" (p. 32). Wortham explains that these models exist at societal, institutional, and local levels (e.g. individual classrooms). In CMC, the notion of local metapragmatic model enables analysis to go beyond identity as membership in a particular community (e.g., Donath, 1998) to considering the various ways of being a member (or non-member) in the range of interactions typical to that community.

...on multiple timescales... Jay Lemke's (2002) notion of identity as performance on multiple timescales is invaluable for considering how individual identity both changes and stays the same over time. In the context of CMC, its application can be illustrated as follows: An analysis of a single chat log might show how an individual participant performs a range of metapragmatic models over a relatively short period of time, potentially taking a different position with every posted comment. An analysis of several logs might reveal how this participant tends to perform the same metapragmatic model in a certain way across a range of interactions. According to Baym (2000), this is how individual identities emerge in online communities, through repeated and distinctive performances of a certain type of community member. Wortham (2006) refers to this repetition as "thickening," as individuals become increasingly associated with their predictable performances. As demonstrated by this chapter, an analysis of all chatlogs from a semester-long project can reveal the thickening and fading of different metapragmatic models performed by a specific individual over time, reflecting an online identity transformation on this semester-long timescale.

...through language. While Goffman (1959) shows that identity performances involve multiple types of "sign-vehicles" (p. 1), language is perhaps the most important semiotic resource for performing identity (e.g., Blommaert, 2005; Butler, 1997; Cameron, 1997; Coupland, 2007; Weedon, 1987). Indeed, every utterance can be considered an "act of identity" (Coupland, 2007) that positions the speaker, the audience, and any third-parties mentioned in relation to one another (see also Schiffrin, 2006). In analyzing the identities of language learners, of special interest are the evaluative and affective stances they take towards themselves and other users of the target language (Ochs, 1996; Thompson & Hunston, 2000). In online, text-based

environments, given the relative absence of other semiotic resources, language is fundamental to identity performances as individuals must "write themselves into being" (boyd, 2007).

Friendship

My approach to analyzing chatlogs for evidence of friendship development and maintenance is guided by Nancy Baym's (2010) recent book, *Personal Connections in the Digital Age*. Drawing on her own research as well as that of others, she identifies several ways in which "communication changes as relationships develop and strengthen" (p. 124). Initial markers of friendliness include informal and playful interactions (Danet, 2001). Playful teasing, for example, can be a sign of camaraderie (Abrams, 2003b). As people become closer, their conversations begin to span a wider range of topics, and they increasingly disclose deeper aspects of themselves and their feelings to one another (Parks & Floyd, 1996). Another key indicator of a strengthening friendship is what Haythornthwaite (2005) refers to as "media multiplexity," or the use of multiple channels of communication. For example, individuals might first meet in a public forum or chat, and as they become better friends they may begin to exchange private emails and text-messages before eventually interacting in person. In chatlogs, media multiplexity manifests itself as references to interactions that take place through other channels.

The study

This chapter presents the initial round of data collection from my multiple-case dissertation study that aims to describe and begin to explain transfer between chatting and speaking in foreign languages. This initial study focused on online interactions only; no oral language data were collected. I had two primary reasons for initially focusing only on online interactions. First, as investigated by learning scientists, for transfer to occur between one activity and another, something must develop or be learned while engaging in the first activity (Bransford et al., 2000). From this perspective, if chatting leads to development in oral language use (e.g., Abrams, 2003a; Beauvois, 1997b; C. Blake, 2009; Payne & Whitney, 2002; Satar & Özdener, 2008; Sykes, 2005), it is logical to assume that there should also be signs of related development in chat. Second, Lam's (2000, 2004) work suggested that changes in language learner identity might be one form of development taking place in chat that can transfer offline and support oral language use. This study was not intended to replicate of her work, but rather to use the propositions developed by her and supported by others (see literature review above) to guide my exploration of the online identities of foreign language students. Specifically I asked:
- What sorts of online identities do foreign language students develop and perform during chat-based instruction?
- In what ways do those identities change over the course of a semester?
- What indications are there that foreign language learners' online identities might support oral language use?

In accordance with the Spanish department of a California university, I offered free and voluntary CMC-based tutoring to second semester Spanish students. This population was chosen because I had taught a section of the first semester course the previous semester, and therefore already knew some of the potential tutees. Of the 100+ students who were invited to participate in this tutoring project, about half signed up, but only 16 participated. This participation varied

from engaging in a single activity over the course the semester to regular weekly participation. Of these 16 students, 8 had been in my class the previous semester.

All tutoring activities took place on a password protected website that included basic communication and collaboration tools such as real-time text chat, asynchronous discussion, surveys, announcements, a calendar, and a document repository. The tutoring project was designed to include two types of activities: two weekly chat sessions of approximately 45 minutes each, and multiple ongoing asynchronous discussions. The topics for these activities were to be based on the course syllabus and materials, as well as course-related questions from the students. In reality, the asynchronous discussions generated almost no activity after the first couple weeks, and the chat sessions ended up lasting longer than planned (60 to 90 minutes). Also, in addition to the topics listed above, many conversations ended up focusing explicitly on learning, studying, and using Spanish, while others focused on issues unrelated to the course or language. Over the semester, a total of 24 chat sessions took place on Sunday and Wednesday evenings at 10pm, with attendance ranging from one to eight students in addition to myself as the tutor.[7]

I used an embedded case study design in an effort to make observations about the group of participants as a whole while also zooming in on the experiences of individual students (Yin, 2009). The logs of the 24 chat sessions comprise my primary data source for this study. During my initial rough-grain analysis of these logs, as multiple stories started to emerge, Xiao stood out because of the clarity with which I was able to track his transformation across the semester. He was not actually the most frequent participant in the project, but as I attempt to show in this chapter, a very compelling story emerges from the transcripts of the 13 sessions he attended and the additional two in which he was mentioned but not present. During and after the tutoring project, Xiao and I exchanged several emails through which he provided his perspectives on participating in the project and on his overall trajectory as a Spanish learner and user. His emails provide a source of triangulation for my analysis of chatlogs. My analysis of logs was guided by Herring's (2004) recommendations for computer-mediated discourse analysis, and employed multiple discourse analytical tools, including critical discourse analysis (Fairclough, 2001), speech act theory (Austin, 1962/2006; Searle, 1972), indexicality (Ochs, 1996), and evaluation (Thompson & Hunston, 2000).

Xiao's transformation

Xiao was born in China but moved to North America as a small child, living in Canada for several years before moving to the US. He attended a large California university and graduated with a degree in biology and a minor in education. During his senior year, he enrolled in beginning Spanish classes, hoping to develop some basic communication skills that would serve him as a future teacher in California. For Spanish 1, I was his instructor. He struck me as a very motivated student, actively participating in all classroom activities, bringing in questions from outside of class, and inquiring about additional opportunities to practice Spanish. When asked later about his favorite aspects of class, he mentioned group activities and daily practice speaking and listening. The following semester, as a Spanish 2 student, Xiao participated in the online tutoring project that is reported upon in this chapter. Xiao was one of a core group that participated regularly in weekly, text-based, real-time chats.

---

[7] The project started three weeks into a 15-week semester.

While Xiao and his classmates performed many different local metapragmatic models over the course of the project, in this chapter I focus on two that are particularly relevant to language learning: 1) *the critical student and inadequate speaker*, and 2) *the student who speaks Spanish with his/her classmates and enjoys it*. At different times throughout the project Xiao exemplified these two metapragmatic models as his repeat performances led to the thickening of each, although not at the same time. Specifically, as depicted in Figure 4.1, for the first several chat sessions of the semester, Xiao regularly performed the critical student and inadequate speaker. However, after the ninth session, these performances disappeared, and from that point on Xiao increasingly performed the student who speaks Spanish with his classmates and enjoys it. As shown, this transformation coincided with evidence of an increasingly strong friendship between Xiao and Anthony, his classmate during both Spanish 1 and Spanish 2.
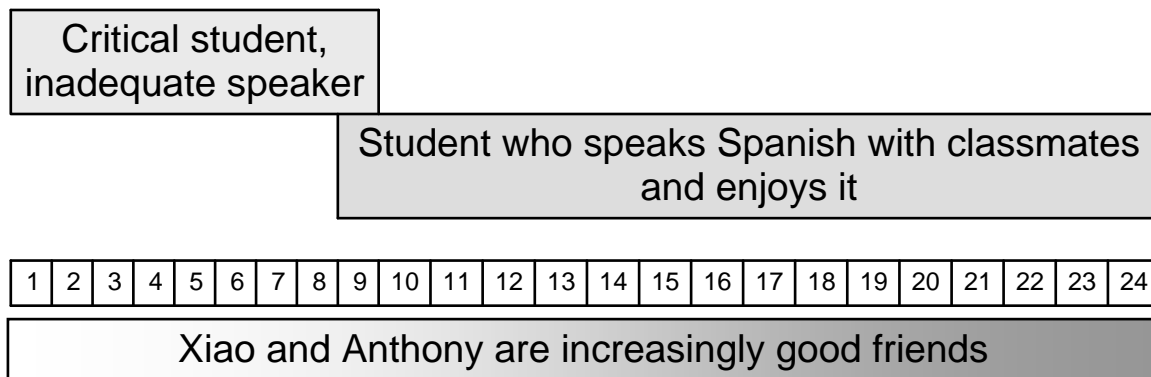

Figure 4.1: Xiao's transformation over the 24 chat sessions

Figure 4.1 also shows that during the ninth session of the project, Xiao performed both metapragmatic models. In fact, over a span of just a few minutes he performed the critical student and inadequate speaker shortly before his first ever performance of the student who speaks Spanish and enjoys it. The segment of chatlog in which both performances appear therefore serves as a fractal for Xiao's overall transformation (Kramsch, 2002a; Larsen-Freeman, 1997). That is, his changing performance during this segment mirrors his greater transformation over the entire semester.

In the remainder of this section, I tell the story of Xiao's transformation through a detailed analysis of this fractal. I go through the segment twice, first focusing on the critical student and inadequate speaker, and then the student who speaks Spanish with his classmates and enjoys it. For each pass, I include only turns that are relevant to the corresponding metapragmatic model. The full segment is included in Appendix 4.1.

Xiao the critical student and inadequate speaker

Early in the ninth session, Xiao had informed the rest of us that he would not be participating as actively as usual because he was concurrently chatting with classmates from another class about an assignment. Indeed, his participation was sporadic, including a 15 minute stretch during which he made no comments. Interestingly, he rejoined the conversation when it turned to evaluations of the students' current Spanish classes.[8]

---

[8] Spanish has been copied directly from chatlogs. English translations (in italics directly below Spanish) generally reflect more normative language.

1	Adam:	a ustedes les gustan tus clases de espanol este semestre? *do you guys like your Spanish classes this semester?*
2	Xiao:	mas o menos pienso que debemos hablar mas *more or less, I think we should speak more*
4	David:	um... es un poco aburrido. No hacemos muchos actividades en grupos *um... it's a bit boring. We don't do many group activities*
6	Adam:	no se si recuerdan, pero el semestre pasado no empezabamos a hacer actividades en grupo hasta la segunda mitad del semestre *I don't know if you guys remember, but last semester we didn't start doing group activities until the second half of the semester*
8	Adam:	Xiao, en tu clase haces proyectos en grupo, no? *Xiao, en your class you guys do group projects, right?*
10	Xiao:	si recientemente *yes, recently*
12	Xiao:	nunca hay demasiado tiempo para hablar *there's never too/very much time to speak*

In this segment, I asked the students if they liked their current Spanish classes (line 1), and Xiao broke his temporary silence by evaluating his class as "mas o menos," literally meaning "more or less" but perhaps better translated as "so-so" (line 2). He justified this lukewarm evaluation by explaining that the class *should* dedicate more time to speaking the language (line 2). David, a classmate of Xiao's from Spanish 1, but in a different section for Spanish 2, also gave a critical evaluation of his class, citing an absence of group activities (line 3). I tried to give some encouragement by suggesting that perhaps there would be more group activities in the future (line 6), and then, based on my knowledge of the teaching style of Xiao's instructor, to some extent I challenged Xiao's position by suggesting that his class must have included some group activities (line 8). Xiao acknowledged that recently there had been some (line 10), but reiterated his general criticism that there was *never* enough time in class for speaking Spanish (line 12).

It is noteworthy that Xiao's critical evaluation of his class was linked directly to his desire for more opportunities to speak Spanish, a desire that reflected his perceived inadequacies as a Spanish speaker. In prior performances of the critical student and inadequate speaker he had made this relationship more explicit. For example, during the first chat of the project he referred to himself as "tan 'awkward' para hablar con otras personas" (*too awkward to speak to other people*) and then added, "tengo que practicar hablar…porque no tengo mucho tiempo en clase para hablar" (*I need to practice speaking…because I don't have much time in class to speak*). Similarly, during the fourth session he referred to himself as "inartículo" (*inarticulate*), and complained, "nunca tenemos tiempo para hacer [las actividades orales] pero me gustaría hacerlo" (*we never have time to do the oral activities, but I'd like to do them*). Over the first several chat sessions, Xiao's negative evaluations of himself and his class thickened into a tight relationship in which the criticisms of the class were justified by his own perceptions of his continuing inadequacy. As an inadequate speaker, Xiao desired more opportunities to practice, which he perceived his class as not providing.

I later showed Xiao this segment from the chatlog and asked him what he remembered. His response clearly corroborated my analysis:

> I remember this part of the conversation - it was the beginning of the semester and I was still feeling a bit nostalgic about our class because there were so many people who were eager to practice speaking Spanish and you gave us many opportunities to do that. I

remember being struck by the difference with my new instructor because, up to that point, she had spent more time explicitly teaching Spanish grammar. *I felt that I had a solid grasp of Spanish grammar and the basic vocabulary for the most part, but [was] anxious to develop my verbal abilities because in my opinion they lagged behind my writing abilities. Based on some of the lectures, I was starting to worry that I wouldn't get a chance to develop those speaking skills in class.* (Emphasis mine)

Xiao's repeated online performances of the critical student and inadequate speaker were clearly aligned with his reported memories of his experience in class. His feelings of nostalgia for the prior semester do hint at an alternative explanation that I address in my discussion, but his online identity seems to be a clear reflection of his offline experience.

Xiao the student who speaks Spanish with his classmates and enjoys it

A second pass through the fractal illustrates the well documented phenomenon that multiple conversations sometimes take place in parallel during text-based chat (e.g., Crystal, 2006). It also illustrates that identities performed through text can be fluid and even contradictory (Ivanic, 1998). Indeed, as Xiao and David complained about their classes, Amanda, a former classmate of theirs from Spanish 1 but in a different section for Spanish 2, presented a contrasting evaluation of her class. In responding to Amanda's comments, Xiao took a strikingly different position than the one discussed above by giving his first performance of the semester of the student who speaks Spanish with his classmates and enjoys it.

1	Adam:	a ustedes les gustan tus clases de espanol este semestre? *do you guys like your Spanish classes this semester?*
5	Amanda:	si si! mi profesora es muy bien *yes yes! my profesor is very good*
7	Adam:	Amanda, cuales son las cosas que te gustan de tu clase? *Amanda, what are the things you like about your class?*
9	Amanda:	la profesora es alegra y muy divertida *the professor is happy and fun*
11	Amanda:	y casi dia hacemos actividades en grupos *and almost (every) day we do group activities*
13	Adam:	entonces todo prefieren actividades en grupos? *so all of you guys prefer group activities?*
20	Amanda:	encontro los estudientes interesantes en grupos *I think the students are interesting in groups*
24	Xiao:	jaja si Amanda es verdad *haha yes Amanda that's true*
25	Xiao:	me gusta mucho hablar en grupo con Anthony *I like speaking to Anthony in groups very much*
27	Amanda:	es divertido a practicar espanol con los otros estudiantes en grupos *it's fun to practice Spanish with the other students in groups*

Again, the stretch starts with me asking the students if they liked their current classes (line 1). Unlike Xiao and David, Amanda responded with an emphatic yes (line 2), highlighting her instructor (lines 2 and 9) and the frequency of group activities in the class (line 11). I asked if all the students preferred group activities (line 12), a question that bridged the two temporarily divergent conversations in the fractal, and Amanda explained that interacting with students in

50

groups was interesting (line 20). Xiao laughed, and agreed with Amanda (line 24) before performing the student who speaks Spanish and enjoys it by acknowledging his in-class interactions with Anthony (line 25). The stretch ends with Amanda performing the same metapragmatic model (line 27).

From this point forward in the project, Xiao's performances of the student who speaks Spanish with his classmates and enjoys it thickened steadily. During almost every chat for the rest of the semester he made references to speaking Spanish, both inside and outside of class. He acknowledged oral group activities in class and thanked classmates for participating with him, e.g.: "carmen! gracias por estar en mi grupo hoy!" (*Carmen! Thanks for being in my group today!*). He reported meeting with classmates outside of class to practice, and made additional plans to do the same, e.g.:

Anthony:	Xiao, quieres conocer el miercoles para practicar
	Xiao do you want to meet on Wednesday to practice?
Xiao:	bien
	okay/yes
Xiao:	el tiempo mismo?
	the same time [as last time]?
Anthony:	si... a las cuarto esta bien...quizas más temprano
	yes... at four is good...maybe earlier

He also reported bumping into current and former classmates on campus and speaking Spanish with them, e.g.: "oh! este viernes pasado encontre a david y se hablamos en espanol por 10-15 minutos" (*oh! this past Friday I bumped into David and we spoke Spanish for 10-15 minutes*).

At the same time, while this metapragmatic model thickened for Xiao, his performances of the critical student and inadequate speaker totally disappeared. Even in session 13 when Anthony criticized their current class by saying that the previous semester had been better "porque muchos los estudiantes hablaban en espanyol" (*because many students spoke in Spanish*), instead of explicitly joining in this criticism, Xiao only jokingly validated the comment, saying "jaja... los recuerdos" (*haha... the memories*).

Through email I asked Xiao about the change I saw in the chatlogs from critically evaluating himself and his class to a much more positive stance. He responded:

> Based on what I remember, I gradually changed my opinion of the class in part because I began to get to know my classmates more and also our instructor began doing a variety of things in class, including more group-based activities, listening to songs, watching videos and stuff like that. I think the most important factor for me in a language class is feeling good about interacting with my classmates and practicing with them. During that time, I met other students who also tried hard to learn and speak Spanish in class and were pretty friendly.

Again it seems that Xiao's online representation was faithful to his offline experience. The transformation of his online identity may have just reflected changes in his offline experiences without necessarily resulting from his extended participation in foreign language chat (cf. Lam, 2004).

However, in the same email I asked Xiao what role, if any, chatting may have played in the observable change. He responded:

> [Chatting] facilitated that connection that I made with the other students in our class, making speaking to them easier in person. The people I felt most comfortable practicing

and speaking Spanish to were the students who I ended up knowing on contexts outside of class - either during the chat, or in another class, or just talking to them on campus. According to Xiao, then, the chatlogs did not simply reflect offline changes, but should in fact document interactions that formed part of those changes. Furthermore, what developed online for Xiao and transferred to his subsequent oral use of Spanish may have been more social and interpersonal than linguistic. Similar to the student quoted by Hudson and Bruckman (2002), Xiao's experience illustrates transfer of dispositions in relation to specific interlocutors. I now turn directly to evidence of his strengthening relationship with one of those interlocutors, Anthony.

Xiao and Anthony

It is no coincidence that Anthony was the student that Xiao mentioned in the fractal while performing the student who speaks Spanish with his classmates and enjoys it. In fact, about half of Xiao's performances of this metapragmatic model involved references to interacting with Anthony. Furthermore, these references represent only one of several indications of a strengthening friendship between these two students.

From early in the project, Xiao and Anthony engaged in the type of playful teasing that Abrams (2003b) linked to camaraderie among students. For example during the fourth session of the project, Xiao made a joke about online dating which he then retracted, causing Anthony to tease him in English:

Xiao:	lo siento, es una broma er... lame
	sorry, that joke was lame
Anthony:	hahahahah, lo siento por mi ingles.....but Xiao, i'm literally laughing out loud
	hahaha, sorry for my English... but Xiao, I'm literally laughing out loud
Anthony:	"es una broma er.....lame"
	"that joke was lame"

In a later session that coincided with the syllabus topic of health issues, the two of them took up my course-related question jokingly while explicitly aligning themselves with one another.

Adam:	ustedes que hacen cuando estan estresados?
	what do you guys do when you're stressed?
Anthony:	tenia mucho miedo y lloraba en los hombros de mi novia
	I was scared and I cried on my girlfriend's shoulder
Xiao:	lloro en la cama
	I cry in bed
Xiao:	jaja
	haha
Xiao:	Anthony y yo pensamos uhh... alike
	Anthony and I think alike
Anthony:	estamos en acuerdo
	we agree

In addition to this sort of joking, Xiao and Anthony's strengthening friendship also manifested itself in ways that didn't involve play and humor. For example, also during the fourth

session of the project, in the middle of a conversation about a class activity, Anthony addressed Xiao directly about a totally different topic.

Anthony:	Xiao, hoy era mi primera dia de enseniar, no estaba bien....... era muy desorganizada *Xiao, today was my first day teaching, it wasn't good... it was very disorganized.*
Xiao:	uh oh, por qué era desorganizada? *uh oh, why was it disorganized?*
Anthony:	no podia encontrar los "worksheets" para mis estudiantes.... por eso, por 7 minutos, no hicieron nada *I couldn't find the worksheets for my students... so for 7 minutes they didn't do anything*
Xiao:	es una problema común de los maestros, no? *It's a common problem for teachers, right?*

Through email interviews I later learned that Xiao had convinced Anthony to do some volunteer teaching work in a local elementary school. In the above interaction, Xiao and Anthony were essentially ignoring the rest of us to engage in some otherwise personal commiseration about the challenges of teaching. Exchanges such as this one illustrate Xiao and Anthony's increasingly wide range of shared interests and their willingness to disclose their own failures and shortcomings (Baym, 2010; Parks & Floyd, 1996).

As their friendship strengthened, they also reported interacting through an increasing number of channels (Haythornthwaite, 2005). During session 13, for example, they exchanged usernames for an instant messaging (IM) platform so that they could continue chatting after the session had ended. Through email, Anthony later told me that they ended up interacting regularly through Facebook and IM. In total, then, by the end of the tutoring project Xiao and Anthony were in frequent contact in person, both in class and out of class, and online, through the tutoring sessions as well as multiple other platforms.

A full year after the end of the tutoring project and Xiao's graduation, he told me that he remained in regular contact with Anthony and considered him to be a friend. He also added that he was continuing to use Spanish in his work as a California school teacher, and he credited his informal use of Spanish with Anthony as being crucial to preparing him to understand his Spanish-speaking students during their peer interactions.

Discussion

Xiao's online transformation towards performing a positive identity as a learner and user of his target language is in some ways similar to the experiences of the ESL students described by Lam (2000, 2004). However, the relationship between his online identity and his offline experiences seems quite different from what Lam describes in her studies. Lam depicts her subjects as marginalized in the classroom and liberated online. Their positive online identities are presented as fundamentally different from their offline counterparts. In contrast, Xiao's online identity seemed to be clearly aligned with his offline experiences. When he was unhappy in the classroom he expressed that discontent online, and when he became satisfied in the classroom that satisfaction manifested itself online. One possible explanation for this difference is that while Xiao was interacting online with interlocutors that he also interacted with in person, Lam's subjects for the most part did not interact with the same interlocutors across environments.

Lam's subjects may have therefore had greater freedom to perform alternative identities (Baym, 2010).

There are also similarities and differences between Xiao's experience and those of Lam's subjects in terms of implications for transfer. In all cases there are indications that what happened online transferred positively to subsequent oral communication, but what specifically transferred is quite different. In Lam's work, learners are described as adopting online identities that embodied positive dispositions towards using their target language. These dispositions are then reported to have transferred offline, facilitating oral language use. In this sense, it is the learners that changed online, enabling them to behave differently in the pre-existing conditions of their offline contexts. In Xiao's case, what appeared to transfer offline were his strengthening friendships with his classmates, especially with Anthony. For Xiao, these online changes were actually an integral part of similarly changing conditions in his offline environment. That is, his online relationship development and maintenance supported the emergence of increasing opportunities for him to practice speaking Spanish both inside and outside of his class. So while his online transformation reflected offline changes, it was also part of those same changes. Unlike Lam's subjects, Xiao was not designing a better language learner identity that would eventually manifest itself offline; he was developing relationships that supported that identity across environments.

Having claimed that Xiao's online transformation reflected changes in his offline language learning environment, I must now address the alternative explanation that I referred to earlier. In one of Xiao's emails cited above he mentioned feeling "nostalgic" for the prior semester in which I had been his instructor. In fact, during multiple performances of the critical student and inadequate speaker, Xiao's criticisms of his current class were made in comparison to the class I had taught. As an instructor I might like to simply feel flattered by his more positive evaluations of my class, but as a researcher I must consider the possibility that he was telling me what he thought I wanted to hear. Furthermore, in the fractal I have used in this chapter, to some extent I challenged Xiao's criticism of his class and aligned myself with his current instructor. Perhaps the subsequent fading of his criticisms was at least partially due to a perception that I no longer wanted to hear such negative evaluations of my colleague.

While I can't invalidate this possible explanation for the disappearance of his performances of the critical student and inadequate speaker, this alternative explanation does not account for his subsequently thickening performances of the student who speaks Spanish with his classmates and enjoys it. In particular, many of Xiao's reports of speaking Spanish, and especially those from outside of class, were corroborated by other students. During sessions in which Xiao was not present, other students such as Anthony and David also reported speaking Spanish with Xiao. My dependence on student reports does highlight the shortcoming of not including offline observations in this initial round of investigation, but it would seem farfetched to suspect that multiple students would have collaborated in fabricating reports of speaking Spanish together.

Generalizations from a single case study are always limited, but Xiao's experience does invite consideration of greater implications. For starters, in addition to prior reports of communicative and dispositional benefits of text-based chat in foreign language instruction, Xiao's case suggests that there can also be social and interpersonal benefits. I do not intend to make a technologically deterministic argument by suggesting that chat, by default, leads to interpersonal relationship development, although it is possible that such an outcome is facilitated by students drawing on informal communicative norms that they associate with chat (e.g.,

Thorne, 2003). Instead, I suggest that chatting represents an additional and alternative channel of communication for students to interact with one another. As Xiao explained, chatting represented an out-of-class context in which he got to know his classmates better. He never mentioned anything about the electronic nature of chatting, but instead stressed the importance of developing relationships that spanned multiple contexts in making him feel more comfortable speaking Spanish with his classmates.

The importance of friendship development appears relatively infrequently in research on foreign language instruction (with Thorne & Payne, 2005 marking an important exception). In ESL research, however, friendship development is frequently reported as a significant factor. In a recent review, Gándara and Orfield (2010) cite findings that "the best predictor of an immigrant student gaining a firm mastery of English and doing well in school was if he or she had a good friend who was a native speaker of English" (p. 13, see also e.g., Olsen, 1997). In light of findings such as these, I wonder how Xiao's experience of friendship development in chat might generalize. How might computer-mediated communication be used in ESL instruction to provide students with more opportunities to interact with and get to know their English speaking classmates? Could such interactions support the development of friendships that could in turn support language learning? Certainly these are questions worthy of future research.

Xiao's case also points to the relational nature of dispositions associated with language use and acquisition (MacIntyre et al., 1998). His transformation could perhaps have been presented in terms of traditional "individual differences" like attitudes, motiviation, and personality traits (e.g., Lightbown & Spada, 2006), but such an analysis would have only told half the story. Xiao's transformation, from awkward and critical to comfortable and content, took place in relation to specific interlocutors and changing social conditions. He changed in relation to the greater language learning ecology that he and his interlocutors were simultaneously changing (Kramsch, 2002b). Had I conceptualized his online identity and its associated dispositions as purely individual traits, I might have missed the link between his transformation, his relationships with his classmates, and the role of chatting in developing those relationships.

In closing, the absence of oral data in this initial investigation leaves me wondering how that data might also have pointed to the relational nature of communicative competence (e.g., Brown, 1996). How might measures of Xiao's oral proficiency have varied in relation to his interlocutor? Would he perform differently when speaking with Anthony than with his instructor than with a stranger? Perhaps future research on transfer between chatting and speaking would benefit from considering these sorts of questions. Advances in transfer research from the learning sciences can help guide future investigations, in part by illuminating that transfer between chatting and speaking is not simply a question of transfer across modality, but also across space, time, and social configurations (Barnett & Ceci, 2002), all of which influence the ways in which one experience may or may not transfer to another (Spencer & Weisberg, 1986).

Chapter Five
Chatting in paragraphs: Towards academic discourse in foreign language chat[9]

I continue the empirical portion of my dissertation with an individual case that takes us from optional, out-of-class chatting to required chat-based instruction conducted in on-campus computer labs. While Xiao's case was one of social interaction and interpersonal relationships, Elizabeth's[10] is one of the development of academic discourse across both online and offline foreign language use. During both chat-based activities and oral class discussions over the course of a semester, her language use became increasingly characterized by longer turns and the use of subordination to express opinions. At the same time she decreasingly engaged in online play over the course of the semester. This case illustrates that depending on the overall instructional context in which text-based chat is integrated, this medium, which is generally assumed to be social and informal, is actually flexible enough to also support the development of academic discourse. I present Elizabeth's case through detailed description of her language use and development across online and offline environments, and illustrate multiple manifestations of transfer.

Background

In the 1990's, the increasing popularity of communicative approaches to second language acquisition (SLA) converged with the proliferation of networked computing and computer-mediated communication (CMC), sparking lasting changes for foreign language instruction in North American universities (Kern & Warschauer, 2000). Researchers and instructors began to move classes to computer labs where students interacted with each other through online chats, and researchers reported a range of benefits for foreign language (L2) development, such as increased motivation, participation, language production, and student autonomy (e.g., Beauvois, 1992; Chun, 1994; Kern, 1995; Warschauer, 1996).

As we complete a second decade of research on CMC and SLA, Ortega's (2009) recent review highlights that findings have actually been mixed over the years, and that contextual factors such as task design, interlocutor, group size, and instructor's role need to be given greater attention. Accordingly, she asks for "temperance and more research" in the face of "euphoric assertions" (p. 244). Nonetheless, in acknowledging the fundamental role that CMC, and especially text-based synchronous forms like instant messaging and chat have come to play in the everyday lives of our students, Ortega adds that "sociological trends make the inclusion of SCMC [(synchronous CMC)] in contemporary classrooms no longer a choice, but rather a necessity and even an ethical imperative" (p. 248). That is, CMC, and text-based SCMC in particular, are not just increasingly prominent in L2 instruction, but perhaps fundamental.

At the same time, purely communicative approaches are slowly starting to fade as applied linguists work to redefine the goals of L2 instruction to meet the needs of today's global flows of people and information (MLA Ad Hoc Committee on Foreign Languages, 2007). One noticeable trend in this redefinition is the increasing use of literary texts and discussions of them at the intermediate level as departments attempt to ease the transition from language study during the

---

[9] A version of this chapter was previously published in the Canadian Modern Language Review (Mendelson, 2012).
[10] All names other than my own are pseudonyms.

early years to literary analysis beyond (Kern, 2000; Paran, 2008). A move towards academic discourse around literary texts seems potentially at odds with Ortega's (2009) insistence on the use of text-based SCMC in language classes. As instruction focuses much less on informal conversation and much more on literary discussion, what is the potential role of a medium generally associated with informal and social interactions (Baron, 2008; Crystal, 2006)?

In this chapter, I present a revelatory case (Yin, 2009) that shows that using text-based chat in L2 instruction does not necessarily conflict with developing academic discourse around interpreting literary texts. I focus on Elizabeth, a student enrolled in a third semester Spanish class that I taught at a large university on the west coast of the United States. Two recurring instructional practices in this class were chat-based activities in an on-campus computer lab and oral discussions of literary texts in the classroom. Detailed analysis of chatlogs and oral discussion transcripts reveals three manifestations of Elizabeth's increasing approximation of academic discourse over the semester: 1) she took longer turns; 2) she improved the frequency, variety, and grammatically of her use of subordination when expressing opinions; and 3) her online play faded after a small number of instances early in the semester. This case points to the importance of the overall instructional context, and task design in particular, in shaping her language use and learning outcomes (Ortega, 2009; Warschauer, 2000). Specifically, chat-based activities were integrated into the course curriculum in ways that seemed to support Elizabeth's approximation of academic discourse. This detailed description of language use and development across online and offline environments provides multiple examples of and insights regarding transfer between chatting and speaking.

The third semester: Towards literary analysis and academic discourse

As is the case at many universities, the third semester Spanish course in this study marked the beginning of a sometimes challenging transition from language learning to studying literature in higher level classes (Kern, 2000). This course was still a language class with a syllabus organized around grammatical structures and communicative functions, but there was also a much greater emphasis on academic discourse and literary analysis than is the case in second semester courses in this same department (e.g., Mendelson, 2010). For example, while both second and third semester courses include similar numbers of reading assignments, during the third semester all readings are literary texts or excerpts from them, while in the second semester many of the texts are informational. Also different during the third semester is that students are expected to write about these texts on exams and in papers as their writing assignments transition from autobiographical narratives to argumentative essays.

Another key difference is the amount of instructional time dedicated to discussing literary texts during the third semester. These discussions have long been a "hallmark" of higher level courses (Donato & Brooks, 2004, p. 185), but as institutions attempt to ease the transition from language study to literary analysis, discussions of literary texts have become increasingly common in intermediate courses as well (Kern, 2000; Paran, 2008). One role of these discussions is to support the development of spoken academic discourse by giving students opportunities for elaborate and extended turns through which they share, contrast, and further develop their ideas about the texts they read (Donato & Brooks, 2004; Hoecherl-Alden, 2006; Kim, 2004; Mantero, 2002; see also Swain, 1985).

Some key characteristics of the more academic discourse expected from students during literary discussions include specialized vocabulary, abstract topics, informational and lexical

density, and grammatical complexity through subordination (Wong Fillmore, 2009). In Spanish, academic discourse also entails using the subjunctive mood, something many English speaking students find difficult (J. Collentine, 2010). Oral academic discourse, because of its longer turns and complex sentence structures, is sometimes referred to as "speaking in paragraphs" (e.g., Valdés, 2004, see also ACTFL, 2012 on oral paragraphs). Building on this metaphor, I describe Elizabeth's approximation of academic discourse during online activities as chatting in paragraphs because she too began to take longer turns that combined multi-clause sentences.

Text-based chat and academic discourse

The use and development of academic discourse in text-based chat has not been thoroughly investigated, perhaps due to an underlying assumption that chat is an informal and conversational medium (Baron, 2008; Crystal, 2006). Sauro's (2011) extensive review on SCMC and second language acquisition (SLA) reported that

> the ability to support cohesion and coherence across longer stretches of discourse or multiple shorter utterances…has received the least amount of attention in studies of SCMC…perhaps due to the abbreviated and conversation-like features of SCMC. (p. 379)

In fact, Kern's (1995) seminal comparison of chat-based versus classroom interactions provided early indications that chat was ill-suited for supporting the use and development of academic discourse. He found online interactions to be characterized by "chattiness, rapid topic shifts, and frequent digressions" (p. 460), thus concluding that "Formal accuracy, stylistic improvement, global coherence, consensus, and *reinforcement of canonical discourse conventions are goals not well served by [chat]*" (p. 470, emphasis mine). Subsequent research on SCMC and SLA, including studies involving chat-based tasks intended to be academic in nature (e.g., Sotillo, 2000) or based on literary discussions (e.g., Beauvois, 1997a), have generally depicted chat-based interactions as informal, social, playful, humorous, and frequently off-task (e.g., Abrams, 2003b, 2008; Beauvois, 1998a; K. Collentine, 2009; Darhower, 2002; Lantolf & Thorne, 2006; Meskill & Anthony, 2007; Vandergriff & Fuchs, 2009; Warner, 2004). One explanation for such findings is that students are accustomed to chatting in their first languages for social and playful purposes, and they draw on their out-of-school communicative norms (i.e., "cultures-of-use") when asked to use SCMC during instructional activities (Thorne, 2003). It should be noted that playing in and with the target language certainly has been linked to positive learning outcomes (e.g., Broner & Tarone, 2001; Darhower, 2002; Lantolf, 1997; Warner, 2004), but it is questionable whether such play facilitates the development of academic discourse (Crystal, 2006; Durán, 2008).

In addition to being characterized as playful and social, chat-based interactions have also been reported to be unlike academic discourse in terms of length of turns and level of syntactic complexity. Crystal (2006), for example, reports that turns in chat and instant messaging are typically only five to six words long. In research on CMC and SLA, Kern (1995) found a higher proportion of short, simple sentences online than face-to-face, and Sotillo (2000) found significantly less subordination in chats than in forums.

There are, however, several noteworthy exceptions that challenge the assumption that SCMC is antithetical to academic discourse. Early work by Chun (1994), Warschuaer (1996), and Beauvois (1998a) all reported that at least some students produced longer turns that combined multiple complex sentences. More recently Payne and Ross (2005) found that students

with higher working memory produced very short turns while those with lower working memory produced significantly longer ones. With regard to playful and off-task behaviors, Beauvois (1998) found that they decreased over the course of her semester-long study, and Collentine (2009) found that they varied by instructional task and student level.

To date, I am unaware of any prior studies that have explicitly investigated the relationship between text-based chat and oral academic discourse. At its core, this relationship is a question of transfer, of "how learning to participate in an activity in one situation can influence (positively or negatively) one's ability to participate in another activity in a different situation" (Greeno et al., 1993, p. 100). Multiple applied linguists have investigated transfer between L2 chatting and speaking, and report generally positive findings. Most notably, comparative studies have found that students whose instruction included chat-based activities achieved gains in oral proficiency that were equivalent to or greater than those of students who received only classroom instruction (Abrams, 2003a; Beauvois, 1997b; C. Blake, 2009; Hirotani, 2009; Kost, 2004; Payne & Whitney, 2002; Satar & Özdener, 2008; Sykes, 2005).

Even so, prominent reviews continue to call for more research on transfer between chatting and speaking (e.g., Chun, 2008; Kern, 2006). Kern (2006) in particular brings up the issue of genre:

> [W]e have learned a great deal about the features of learner interactions and language use within online environments, *but we still know little about how those abilities might be transferred across different environments, communicative genres, and modalities.* (p. 202, emphasis mine)

Indeed, consideration of the social, informal, and playful genres associated with SCMC in comparison to the more academic discourses increasingly expected from language learners may invite some to question whether transfer between L2 chatting and L2 speaking is even desirable (Crystal, 2006; Durán, 2008).

Currently, positive findings of transfer between chatting and speaking provide more evidence regarding the development of conversational skills than academic discourse. Studies on the impact of chatting on oral proficiency tend to use evaluations that ask students about family, travel, and daily routines, questions that require narrating about the past more than expressing and supporting opinions (e.g., Payne & Whitney, 2002, p. 31). Some studies investigate fluency but not content (C. Blake, 2009) and others report that L2 chat helps students speak more, but not necessarily better (Abrams, 2003a; Lam, 2004). It has also been suggested that social interactions in chat can support the development of relationships between classmates that transfer offline, facilitating subsequent oral interactions (Abrams, 2003b; Beauvois, 1997b; Hudson & Bruckman, 2002).

Evidence of transfer of more academic language is sparse. Compton (2002) had international graduate students in an ESL course chat immediately before giving individual oral presentations that required making and defending arguments. She found that during oral presentations students repeated words and phrases that they and their chatmates had previously written while chatting. She did not link this immediate transfer to longer trajectories of academic language development. Shin (2006) investigated weekly chat sessions added to an ESL course for graduates students. Over the semester the chats increasingly focused on academic topics, and the participants perceived chatting as preparation for on-campus interactions. While no transfer was documented, some learning scientists argue that perceptions of future applicability make the phenomenon more likely to occur (Engle, 2006; Greeno et al., 1993; Pea, 1987).

There are also a small number of studies that, while not focused on academic discourse, suggest that chat-based instruction can potentially target specific linguistic forms and communicative functions that can then transfer to oral communication. Sykes (2005) investigated the use of chat in an instructional unit that targeted accepting and declining invitations and found evidence of transfer to subsequent oral performances of these speech acts. Shamsudin and Nesi (2006) investigated the use of chat in a course on English for specific purposes and found that chat-based tasks designed to mimic interviews and meetings prepared engineering students for subsequent participation in oral versions of these interactions. These studies do not address academic discourse, but do warrant considering what might happen if chat-based instruction were designed to target specific forms and functions associated with academic discourse.

Methods

Transfer is often investigated experimentally using a three-part design: 1) an evaluation of the target activity (e.g., oral pre-test); 2) engagement in the activity to be transferred (e.g., chatting); and 3) another evaluation of the target activity (e.g., oral post-test). This format has been quite common in SLA research on transfer between chatting and speaking (Abrams, 2003a; Beauvois, 1997b; C. Blake, 2009; Hirotani, 2009; Kost, 2004; Payne & Whitney, 2002; Satar & Özdener, 2008; Sykes, 2005). In these studies, however, students also engaged in oral activities between oral pre and post-tests, which should also presumably influence their final oral performance. Beach (1999) refers to this special type of transfer as a "collateral transition" in which two different but related activities mutually contribute to a single learning outcome. He proposes that collateral transitions are best understood through concurrent qualitative investigation of both activities. Baym (2006) and Leander (2008) make similar methodological suggestions for investigating social and communicative practices that span online and offline environments.

This study takes up those suggestions through detailed analysis of online and offline language use of a single student over the course of a semester-long Spanish course. As a single case study, this work does not pretend to causally prove or definitively explain transfer between chatting and speaking. Instead, I provide a robust description of Elizabeth's language use and development across the two media while linking her semester-long trajectory to her particular instructional context. To date I have been unable to find a similarly detailed description of this phenomenon, with Eva Lam's (2004) work on out-of-school chatting by ESL students as a partial model. Furthermore, Elizabeth's use and development of academic language during chat-based activities makes her case especially revelatory (Yin, 2009).

Instructional context and focal practices

Elizabeth was one of 17 students, most of them in their third or fourth year at the university, who completed this third-semester Spanish class.[11] The class met for 50 minutes, five days per week for 14 weeks. I had been teaching in the department for two years.

Six times over the semester the class met in an on-campus computer lab where students chatted in groups of two to five for about 25 minutes. Chat activities were designed around the department-provided course syllabus and always involved a follow-up task, such as collaboratively authoring a blog post or engaging in a whole-class oral discussion. A detailed

---

[11] Two students dropped before the end of the semester.

example is provided below, and summaries of all six sessions are included in Appendix 5.1. As the instructor, I did not participate in chats, but sometimes brought annotated chatlogs to class the next day for error correction activities.

Twelve times over the semester students read a text for homework. These readings came primarily from *Pasajes Literatura* (Bretz, Dvorak, Kirschner, & Kihyet, 2009), a reader for second-year Spanish courses that contains poems, short stories, plays, and excerpts from novels. One reading was a children's book. On days after reading assignments, class included an oral discussion of the text. These discussions were characterized by my open-ended questions and solicitations for opinions (e.g., "¿Ustedes qué opinan? / *What do you all think?*", "¿Otras opiniones? / *Other opinions?*"), and by the students' self-selected responses by raising their hands or calling out. Reading discussions lasted about 25 minutes with the remainder of the class period dedicated to other text-related activities. Three of these reading discussions took place in the computer lab on days in which students chatted about the reading in preparation for the immediately following oral discussion.

Sample activity: October 14th chat and discussion about "Pueblos del Mundo"

The October 14th session was illustrative of the way specific communicative functions and linguistic forms were targeted during chat-based activities. This session also exemplified chatting about a reading assignment in preparation for an immediately following oral discussion. Furthermore, my data and analysis point to this session as particularly important in Elizabeth's semester-long trajectory.

This session, about halfway through the semester, was our third chat and the first that focused on a reading assignment. The reading was a children's book from 1974 titled "Pueblos del Mundo" (*Peoples of the World*). The book appears to attempt to foster multicultural awareness, but ends up perpetuating stereotypes with lines like "Japanese people can be recognized by their yellow skin," "Africans are waiting for our help," and "Europeans are friendly." I've used this book multiple times in my Spanish classes and found that it provokes strong reactions from students and motivates them to express opinions.

Figure 5.1 (next page) shows a translation of the handout students received for this session (Appendix 5.2 includes the original version). The handout explicitly instructed students to express their opinions about the book while chatting. Furthermore, the handout provides specific linguistic structures for expressing opinions.

Figure 5.1: Handout from October 14th activity (Translated)

After the students had chatted for about 25 minutes, I called for their attention and started the oral discussion by asking for volunteers to share opinions. The discussion lasted about 20 minutes as we went over the questions from the handout. For class the next day I brought print-outs of the chatlogs in which I had highlighted all expressions of opinion. Students worked in groups to evaluate and (if necessary) correct these expressions.

Focal student: Elizabeth

Three characteristics made Elizabeth an appropriate focal student for this study. First, a comparison between final oral evaluations and short interviews recorded during the first week of class showed that Elizabeth made much greater oral gains than many of her classmates. Using the same, department-provided rubric and 100-point scale to score both samples, I found that on average the class improved from 82 to 86, whereas Elizabeth improved from 77 to 88. She had the second highest gain in the class, and was one of only three students that moved from below average on the initial interview to above average on the final evaluation. These gains suggested that analysis of her language use across the semester should yield a rich description of her trajectory of oral language development. Second, Elizabeth was one of the most active participants during chats and reading discussions, sending the fifth highest number of messages to the chat server and taking the second highest number of turns during discussions. Her level of participation meant there were ample data for detailed analysis of both online and oral language use. Third, she was willing to participate in interviews after the course had ended.

Elizabeth was in her third year at the university. She had studied Spanish in high school, but three years had passed since her last course. She was taking Spanish to fulfil a language requirement for her major in film studies. She had also taken some English literature courses and reported enjoying them. Over the semester Elizabeth was absent from one chat session and one reading discussion.

Data collection

As the instructor, I was much more of a participant than an observer during data collection. I therefore used technology to capture the instructional context so that I could later observe it as a relative outsider. This scenario also necessitated post-hoc interviews with my students. For this chapter I drew primarily on three sources of data: a) Elizabeth's written chat messages as recorded by the server; b) Elizabeth's turns during oral reading discussions as captured through video; and c) Elizabeth's perceptions of her experience in the class as captured through interviews. Interviews combined open-ended questions and stimulated recall questions in which I asked her to comment on a piece of transcript, chatlog, or video (Gass & Mackey, 2000).

Analytical approach

Analysis was guided by Herring's (2004) suggestions for computer-mediated discourse analysis. This is a code-and-count technique of content analysis that depends on additional discourse analytical tools for operationalizing constructs, involves interviews with subjects for validating subjective coding, and may include statistical analyses (see also Chi, 1997 on quantifying qualitative data). Below, with my data and findings, I further specify my use of Bakhtin's (1986) notion of utterances for delimiting turns, van Eemeren and Grootendorst's (1983) work on speech acts in argumentative discussions for considering expressions of opinions, and Danet's (2001) work on cyberplay for identifying jokes.

Data and Findings

I organize this section around three manifestations of Elizabeth's approximation of academic discourse over the course of the semester. First, I show that Elizabeth's online turns became increasingly longer as she began to chat in paragraphs. Second, I show that Elizabeth increased the frequency, diversity, and grammaticality of her expressions of opinions in subordinate clauses in both environments. Third, I examine the small number of jokes that Elizabeth made in chat, showing that they decreased over the semester as her chatting became more academic.

Chatting in paragraphs

Based on previous research linking L2 chat to quantity of oral discourse (Abrams, 2003a; Hirotani, 2009; Lam, 2004) I started with simple quantitative comparisons of Elizabeth's language use during chat-based activities and oral discussions of readings. Table 5.1 shows her session means for words, turns, and length of turns (in words) in both environments, and includes

p-values from the two-tailed, independent samples t-tests used for comparisons.[12] Consistent with earlier research, the table shows that Elizabeth's chatting was characterized by taking a higher number of relatively short turns, while her speaking during oral discussions was characterized by taking a smaller number of longer turns. Elizabeth produced about the same amount of language (in total words) in both environments.

Table 5.1: Elizabeth's average output per session in both environments

	Chat-based activities	Oral discussions	p-value
Words (*SD*)	202.4 (40.55)	184 (61.61)	.58
Turns (*SD*)	29 (10.95)	7.5 (2.27)	$< .01*$
Turn length (*SD*)	7.81 (3.43)	26.39 (13.13)	$< .01*$

* significant at $\alpha = .05$ based on two-tailed, independent samples t-test.

I must note that these comparisons are not without their complications. Recent studies using screen and key capture technologies have found that students generally produce more language during chats than is reflected in logs because they sometimes edit their messages before sending them (e.g., O'Rourke, 2008; B. Smith, 2008). It is therefore possible that Elizabeth's quantity of discourse during chats was higher than is reflected by the numbers here, although she reported that she did not remember editing her messages. Her lower number of turns during oral discussions was also influenced by the social context. During whole-class discussions, 17 students and the instructor vied for the floor, limiting opportunities for participation. In contrast, chat activities involved only two to five students, and the technology enabled everyone to contribute simultaneously. Even so, it is safe to say that Elizabeth took a greater number of generally shorter turns while chatting than during oral discussions of texts.

A closer analysis of the length of Elizabeth's turns, however, reveals that while they remained fairly stable across oral discussions (*M* = 26.39 words, *SD* = 13.13), in chat they increased over the semester. Analyzing turns in chat was not nearly as straightforward as analyzing words. I operationalized turns based on Bakhtin's (1986) definition of utterances, and therefore used changes in speaker to delimit them, meaning that a single turn during chat often spanned multiple carriage returns (Baron, 2008; Crystal, 2006). For example, consider Excerpt 1 in which Elizabeth and Raquel discussed the author of the reading for the chat on October 14th.[13]

```
Excerpt 1
Raquel      que es el cultura de autor?
            what is the author's culture?
Elizabeth   creo que el autor es de los estadios unidos o mexico
            I think the author is from the united states or mexico
Elizabeth   norte america no esta en el cuento, si?
            north america isn't in the story, right?
Raquel      oo si. si
            oh yes. Yes
```

[13] In all excerpts Spanish language has been copied directly from chatlogs or transcribed as spoken. English translations (in italics directly below Spanish) generally reflect more normative language. Many readers will notice the number of grammatical errors in all excerpts. These errors highlight that even at the end of the semester Elizabeth's language was still only an approximation of academic discourse.

Here, I counted both of Elizabeth's messages as a single turn as there is no change in speaker.

Sometimes turns in chat were also interspersed with messages from other students, resulting in broken sequentiality (Crystal, 2006). When overlapping occurred, if Elizabeth made no indication of finalizing her turn to respond to interspersed messages or to receive a response to what she was typing (Bakhtin, 1986), I continued to count her successive carriage returns as a single turn. For example, in Excerpt 2 from the November 6th chat, Elizabeth made no acknowledgment of Melissa's message:

Excerpt 2
Elizabeth   es possible que el capitain tenga...uncountable (guilt) porque he matado muchos personas
it's possible that the captain had...uncountable (guilt) because he's killed many people
Melissa   Soy pensando un poquito en lost teorias de Nitsche...ha leedo algo de el?
I'm thinking a bit about the theories of Nietzsche...have you read anything by him?
Elizabeth   y por eso vistio al barbero preparado a morir
and that's why he went to the barber prepared to die.

Here, both of Elizabeth's messages were counted as part of the same turn.

Table 5.2 shows Elizabeth's average turn length, longest turn, and group size for each of the five chat-based activities in which she participated. As shown, her average turn length essentially doubled from around 5 words in her first three chats to over 10 during the last two. Her longest turn during each session also shows an upward trend; with the exception of the second chat of the semester her longest turn increased from each chat to the next. By the last two chats of the semester, Elizabeth's online discourse was clearly characterized by much longer turns than what she had used earlier in the semester.

Table 5.2: Elizabeth's turn length during chat based activities

Date			Group size (students)
	Average turn length (words)	Longest turn (words)	
4-Sep	5.7	14	3
25-Sep	5.41	12	4
14-Oct	5.08	22	3
23-Oct	10.2	43	3
6-Nov	12.67	50	2
M	7.81	28.2	3

To illustrate this increase, Excerpt 3 shows her longest turn from the first chat of the semester (September 4th) in which she and her classmates were discussing their plans for the weekend.

Excerpt 3
Elizabeth   mis padres quiren mirar muchos, porque son hippies
my parents want to see [the movie] because they are hippies
Elizabeth   y yo me gusta Ang Lee
and I like Ang Lee

Here, across two carriage returns she took a turn consisting of 14 words. In contrast, Excerpt 4 is her longest turn from her final chat of the semester (November 6th), a discussion of a short story.

Excerpt 4

Elizabeth	es possible que el capitain tenga...uncountable (guilt) porque he matado muchos personas
	it's possible that the captain had...uncountable (guilt) because he's killed many people
Melissa	Soy pensando un poquito en lost teorias de Nitsche...ha leedo algo de el?
	I'm thinking a bit about the theories of Nietzsche...have you read anything by him?
Elizabeth	y por eso vistio al barbero preparado a morir
	and that's why he went to the barber prepared to die.
Elizabeth	y cuando dijo que "no es facil matar"
	and when he said "it's not easy to kill"
Elizabeth	dijo que el es un hombre mas...grande, o mas fuerte del barbero
	he's saying that he's...a bigger, or stronger man than the barber
Elizabeth	porque el puede matar y el barbero no puede
	because he's capable of killing and the barber isn't

Here, across five carriage returns she uses 50 words in taking a single turn.

A closer look at these two excerpts suggests that in addition to being much longer, Excerpt 4 is more academic than Excerpt 3 in other ways as well. It is likely that this difference can be at least partially attributed to the instructional context in that these two different chat-based tasks may have called for different communicative genres. The topic of Excerpt 3, weekend plans, is typical of social conversation, while the topic of Excerpt 4, a literary text, is much more academic. In Excerpt 4, Elizabeth's vocabulary is not necessarily more sophisticated, but her sentence structure is more complex. The way in which she links several multiple-clause sentences into one long turn in Excerpt 4 clearly illustrates chatting in paragraphs. Elizabeth's less academic interaction in Excerpt 3 should not be interpreted as off-task, but the task itself – to talk about future plans for the weekend – was less academic than the literary discussion in Excerpt 4.

Looking at an intermediary example, however, suggests that task design alone did not account for the increasing length of Elizabeth's turns. Excerpt 5 shows Elizabeth's longest turn from the third chat of the semester (October 14th), as she defended her position that the children's book they had read was not about injustice:

Excerpt 5

Robert	si, pero tu lo leiste si?
	yes, but you read it, right?
Elizabeth	si......pero es muy sencillo....
	yes.....but it's very simple....
Elizabeth	no creo que hablar de la injustisia fue el intention del autor....
	I don't think speaking about injustice was the intention of the author....
Elizabeth	porque...es un cuento sencillo para ninos...
	because...it's a simple story for children...

Here, she produced a turn that was longer and more complex than any of her prior turns from the semester, but still not as long as her longest turns from her next two chats. The task design for

this third chat was very similar to that of the fifth chat; both involved expressing opinions about texts. So, while it can't be ignored that during the fifth chat she was in a group of two rather than three students, the fact that her longest turn from the fifth chat (Excerpt 4) was more than twice as long as her longest turn from the third chat (Excerpt 5), along with the intermediary increase during the fourth chat (see Table 5.2), indicate that Elizabeth's chatting in paragraphs developed over the course of the semester.

 Expressing opinions with subordinate clauses

In addition to taking longer turns, Elizabeth increasingly approximated academic discourse through her use of subordination in expressing opinions (Valdés, 2004; Wong Fillmore, 2009). In Spanish, this speech act often requires using the subjunctive mood, something that can be quite challenging for English speaking students to learn (J. Collentine, 2010). van Eemeren and Grootendorst's (1983) extensive work on argumentative discussions explains that expressions of opinion can be difficult to identify because they take on many forms, including some that don't necessarily meet Searle's (1972) original criteria for assertions. I limited my analysis to expressions that were formally marked by one clause introducing another (e.g., yo creo que… / *I think that...*; see Kern, 1995) because these easily identifiable structures were emphasized in the course materials.

Figure 5.2 (next page) shows all the different two-clause structures that Elizabeth used to express opinions during chats and oral reading discussions throughout the entire semester. Rows in grey indicate chat-based activities. Columns are grouped according to the mood required for each structure (indicative or subjunctive), and then ordered, from left to right, based on the order in which Elizabeth first used each structure over the course of the semester. The figure also shows which mood Elizabeth used for each expression, and whether the mood was correct or incorrect. Cells labelled "both" indicate that during a given session, Elizabeth used the same structure multiple times, at least once with the correct mood and once with the incorrect mood.

One particularly salient pattern that emerges from these data is that over the course of the semester Elizabeth clearly used an increasing variety of subordination-requiring structures to express opinions during both chats and oral discussions. Statistical analysis shows a strong and significant correlation between the session date and number of different structures used ($r[11] = .69$, $p = .01$) and total number of expressions ($r[11] = .75$, $p < .01$).

Figure 5.2 further suggests that the chat session on October 14th was a turning point in the semester with regard to using subordination in expressions of opinions. Before October 14th, Elizabeth was using some of these expressions in oral discussions, but had used only one in chat. From October 14th on, her quantity and variety of these expressions increased in both environments. Additionally, October 14th marked the beginning of Elizabeth's efforts to use the subjunctive mood in these expressions.

	Structures requiring indicative mood						Structures requiring subjunctive mood									
	creer que *to think that*	parecer que *to seem that*	parecer claro que *to seem clear that*	ser verdad que *to be true that*	pensar que *to think that*	ser claro que *to be clear that*	no creer que *to not think that*	ser posible que *to be possible that*	parecer mal que *to seem bad that*	ser bueno que *to be good that*	ser interesante que *to be interesting that*	ser dudoso que *to be doubtful that*	interesar que *to interest that*	ser importante que *to be important that*	Different	Total
4-Sep															0	0
18-Sep	ind						ind*	ind*							3	4
25-Sep	ind														1	1
29-Sep	ind							ind*							2	3
2-Oct	ind														1	2
5-Oct	ind	Ind													2	4
14-Oct	ind		ind				ind*	sbjv	ind*						5	7
14-Oct	ind			ind											2	2
16-Oct	sbjv*		ind		ind					ind*					4	4
19-Oct					ind	ind					ind*				3	4
23-Oct	both											sbjv			2	4
6-Nov	ind				ind			sbjv					Sbjv		4	6
6-Nov	ind				ind			both						ind*	4	11
														M	2.54	4.08

chat session
ind = indicative mood;
sbjv = subjunctive mood
*incorrect mood

Figure 5.2: Elizabeth's expressions of opinion in subordinate clauses for the entire semester

68

Clearly the overall instructional context and task design were relevant factors in these patterns. Before October 14th, Elizabeth had not been explicitly asked to express opinions in chat activities whereas opinions had been solicited during reading discussions from the beginning of the semester. As explained in my methods section, students received a handout for the October 14th chat that explicitly instructed them to express their opinions about the reading they had done the night before, and also provided examples with many of the structures that Elizabeth eventually used throughout the semester (Figure 5.1). The handout for the following chat (October 23rd) included similar support for expressing opinions. In general, during the second half of the semester instruction increasingly addressed expressing opinions in subordinate clauses and using the subjunctive.

Elizabeth's data provide some evidence of transfer of this speech act between chatting and speaking (cf. Sykes, 2005). During the sessions in which oral discussions took place immediately after chatting, Elizabeth sometimes articulated opinions in chat before repeating them during the oral discussion. Table 5.3 provides two examples that are reminiscent of the immediate transfer reported by Compton (2002). When asked about chatting right before speaking, Elizabeth said, "I remember being quite focused on preparing myself for the discussions while chatting, I think because I believed that was part of the point of the chat." For her, the task design apparently facilitated, or perhaps even called for this immediate transfer.

Table 5.3: Examples of immediate transfer between chatting and speaking

Date	Elizabeth in chat	Elizabeth in discussion
14-Oct	Creo que el cuento es racista (…) me parece mal que los dibujos de los paises son esteriotipos. *I think the story is racist (…) it seems bad to me that the drawings of the countries are stereotypes.*	Creo que es un poco racista (…) porque, um, los descripciones de países ((inaudible)) estereotipos. *I think it"s a bit racist (…) because the descriptions of countries ((inaudible)) stereotypes.*
6-Nov	es possible que el capitán tenga…uncountable (guilt) porque he matado muchos personas *it's possible that the captain had…uncountable (guilt) because he's killed many people*	Creo que es posible que el capitán siente, ¿Como se dice guilt? *I think that it"s possible that the captain feels, how do you say guilt?*

Elizabeth's use of the subjunctive mood in these two-clause expressions of opinion may also indicate transfer. She had never attempted to use the subjunctive when expressing an opinion during a reading discussion until October 16th, after having used it during the October 14th chat. Additionally, she used the subjunctive correctly to express opinions four times in chat before using it correctly during her last oral discussion of the semester (November 6th). This lag between chat-based and oral use of the subjunctive may simply reflect differences in the medium and task design; in chat Elizabeth had more time to construct visual as opposed to auditory utterances, and she sometimes had handouts providing her with examples. At the same time, practice in this potentially less cognitively demanding environment may have been crucial to her eventual, grammatically-correct use of the subjunctive when speaking (Payne & Ross, 2005; Payne & Whitney, 2002; Sykes, 2005). Even so, because the subjunctive was targeted in many

instructional tasks during the second half of the semester, it is safest to suggest that practice in chat was likely one of multiple contributors to Elizabeth's improving grammaticality in her expressions of opinions.

When Elizabeth expressed opinions with subordination during chat sessions that included a handout with examples (third and fourth chats) she may have simply been attempting to follow instructions while using the handout for support. However, her continued use of these structures during oral discussions and during her final chat of the semester (which did not include a handout with examples) again suggests transfer while highlighting her increasing approximation of academic discourse. One particularly desired characteristic of transfer is that it be spontaneous with individuals recognizing that a situation calls for prior knowledge without being explicitly prompted to use it (e.g., Barnett & Ceci, 2002). During oral discussions, students were asked for opinions, but were never told what sort of linguistic structures to use or provided with written examples to help them construct their utterances. The same was true of Elizabeth's final chat. Even so, from October 14th on, she regularly used these expressions online and off, whether instructed to do so or not. By the end of the semester, Elizabeth appeared to draw spontaneously on her prior experiences from both environments in her subsequent expressions of opinions in both environments.

Counterexample: Joking in chat

My claims that Elizabeth's chatting became more academic over the course of the semester contradict assumptions that chatting is an informal and playful medium of communication ill-suited to support the development of academic registers (Crystal, 2006; Durán, 2008; Kern, 1995). In truth, Elizabeth did make a small number of jokes in chat, but only early in the semester. The fading of her early joking thus further supports my claim that her chatting became more academic. According to Elizabeth, the disappearance of jokes in chat was very much influenced by the instructional context, including her perceptions of task expectations and her relationships with her classmates.

My initial identification of jokes was based on expressions of laughter in the chatlogs, such as "haha" in English and "jaja" in Spanish (Danet, 2001). I then corroborated my coding with Elizabeth by asking for her perspective on her intentions behind the turns to which her classmates responded with expressions of laughter (Herring, 2004).

During the first chat activity of the semester, Elizabeth engaged in more playful behavior than during any other chat, an outcome similar to Beauvois' (1998a). Excerpt 6 shows an example of one of Elizabeth's jokes in the form of a humorous response to a classmate's question about daily routines, one of the topics of that session:

> Excerpt 6
> Lisa   se banan en la manana o a noche?
>   *do you two bathe in the morning or at night?*
> Elizabeth   me bano en la manana
>   *I bathe in the morning*
> Amala   me bano a noche
>   *I bathe at night*
> Lisa   me bano en la manana tambien
>   *I bathe in the morning too*
> **Elizabeth**   **porque si no me ducho, mi pelo esta "Frizzy"**
>   ***because if I don"t take a shower, my hair is frizzy.***

70

Lisa	ja ja
	ha ha
Amala	Jaja
	Haha

When I asked Elizabeth about her play during the first chat, she said, "Okay, um, in the chat you just showed us, I think it was easier for me to joke and be friendly in the chat because I didn't know anyone yet." In a later interview she added, "I do remember in the first chat because we didn't really know what was going on, making jokes in chat is something people are familiar with, so maybe that was a way to make the activity more familiar was to joke around." For Elizabeth, then, joking around was a familiar activity from chatting in her first language, and perhaps one she defaulted to when she didn't know what else to do (cf. Thorne, 2003).

When I asked her why she didn't make jokes in later chats, she explained that as she got to know her classmates better through face-to-face interactions in the classroom, "the get to know you, have fun chatting together aspect of the chat wasn't really there anymore because it was so much more immediate in talking." Unlike prior findings of online social interactions facilitating subsequent face-to-face interactions (Abrams, 2003b; Beauvois, 1997b; Hudson & Bruckman, 2002), in Elizabeth's case it seems that social and playful interactions in class replaced any need for joking during chats, thus facilitating more academic interactions online.

She also attributed her decrease in joking to the overall instructional context in which the chats were embedded:

> Chatting, because it was an assignment, made it feel less casual…Like just the awareness that it was to practice grammar might have something to do with it, and also like, the fact that we would print out the conversations after and like go over the grammar [in class the next day].

The explicit instructions to use specific linguistic forms and the inclusion of annotated logs in subsequent classroom activities led Elizabeth to perceive the chats as assignments that called for more formal interactions. Given the importance Elizabeth placed on the instructional context in encouraging her to chat more academically later in the semester, it is certainly possible that her higher level of play during the first chat related to the less academic topic (daily routines and weekend plans) of that chat.

Discussion

Over the course of the semester, Elizabeth increasingly approximated academic discourse during both chat-based activities and oral discussions of literary texts. In both environments she took paragraph-length turns by linking multiple complex sentences, while also improving the quantity, variety, and grammaticality of her expressions of opinions in subordinate clauses. Additionally, while early in the semester she did some joking around in chat, later in the semester her playful online interactions faded.

The data collected for this case indicate that the overall instructional context of the course played a role in the way in which Elizabeth's online language use changed over the semester (Ortega, 2009; Warschauer, 2000). For one, the design of chat-based tasks became arguably more academic during the semester, starting with an activity organized around daily routines, and ending with online literary discussions. Additionally, Elizabeth reported that she came to perceive chats as assignments that targeted specific linguistic forms and related to subsequent classroom activities, and thus called for more academic communicative norms. At the same time,

because physical class meetings provided her with ample opportunities to joke around and bond with her classmates, Elizabeth reported that later in the semester she felt no need to engage online in the sort of play that is often associated with chatting (e.g., Crystal, 2006; Danet, 2001). All in all, the overarching emphasis of this course on helping students transition towards academic discourse around literary texts, and the specific emphasis during the second half of the semester on using subordination in expressions of opinions, clearly manifested themselves in Elizabeth's move towards chatting in paragraphs.

Elizabeth's case provides an interesting illustration of Thorne's (2003) "cultures-of-use," a construct that is often employed to explain students' playful and off-task behaviors during chat-based instruction. Elizabeth attributed her online play early in the semester to her out-of-school experiences, stating that "making jokes in chat is something people are familiar with." However, by later in the semester she perceived chatting in class as "an assignment [which] made it feel less casual." As Thorne explains, "Cultures-of-use, however mitigating or facilitative, are dynamic and will necessarily evolve in relation to the object of an individual or collective activity" (p. 57). Elizabeth's case illustrates just such an evolution as her online communicative norms adjusted to the context in which she was chatting. Even so, Elizabeth is only one student, and one who not only participated quite actively in all aspects of the course, but also who described herself as "tend[ing] to want to follow instructions." Analysis of the rest of the class would be necessary to gauge how widespread this new culture-of-use may have become.

Close analysis of Elizabeth's chatlogs and transcripts from oral discussions provide some evidence of transfer between the two environments. During sessions in which chatting took place immediately before speaking, there are clear examples in which Elizabeth articulated opinions online that she then repeated orally (see also Compton, 2002). Additionally, her use of the subjunctive during chat-based activities, in terms of both frequency and grammaticality, preceded her use of this mood during oral discussions. This sequentiality may be indicative of transfer, although the subjunctive mood was also addressed by many other instructional materials and tasks that likely contributed to Elizabeth's gains as well. Finally, her paragraph-length turns and high number of expressions of opinions through subordination during her final chat of the semester also point to transfer. During this session, Elizabeth spontaneously chatted in paragraphs despite the absence of explicit instructions to use specific linguistic forms and communicative functions. She seemed to perceive this task as calling for academic communicative norms, and accordingly transferred in those norms that she had been learning throughout the semester both online and in class.

Elizabeth's language development across environments appears to be an example of a collateral transition (Beach, 1999) in which both chatting and oral literary discussions were contributing to her increasing approximations of academic discourse. As in other studies on online/offline social and communicative practices, it is possible that her language use in each of the two environments mutually influenced one another (Baym, 2006; Leander, 2008). Perhaps Elizabeth's classroom experiences of discussing literary texts and expressing opinions in paragraph-length turns supported her eventual chatting in paragraphs. In turn, perhaps her focused practice in chat with specific structures for expressing opinions through subordination and using the subjunctive mood supported her subsequent oral language use. It is also possible that using these same forms in both environments had a synergistic effect that contributed to her language development across environments (Sykes, 2005). Elizabeth's outcome could potentially be consistent with any of these explanations. Furthermore, as a single case, and given the existence of other potentially contributing factors (e.g., homework, out-of-class practice,

activation of language from prior Spanish classes), this study was simply not designed to definitively determine the causes of her language development or to compare her with students who engaged only in similar oral literary discussions or only in similar chat-based activities.

Nonetheless, it seems reasonable to suggest that the integration of chat-based instruction as described in this study was part of a productive environment for Elizabeth's improving approximation of academic discourse. Prior studies have made use of online literary discussions (e.g., Beauvois, 1997a) or form-focused chat-based activities (e.g., Fiori, 2005), but I am unaware of prior attempts to do both simultaneously. Certainly additional research is needed, but Elizabeth's case illuminates this combination as a potentially promising way to use chat-based instruction to target academic discourse (cf. Shamsudin & Nesi, 2006).

Conclusion

L2 instruction in many North American universities seems to be changing in ways that call for approaches and objectives that are quite different from those that were popular when CMC first found its way into language classes. Students are beginning to spend more time discussing literature and less time engaging in casual conversations with their classmates (MLA Ad Hoc Committee on Foreign Languages, 2007; Paran, 2008). Currently, intermediate courses are perhaps the primary locus of this shift (e.g., Kern, 2000).

Given the emphasis on conversational interactions in most research on L2 chat, the changing pedagogical environment may seem at odds with Ortega's (2009) call for more rather than less SCMC in L2 instruction. However, Ortega also stresses the importance of instructional context in shaping language use and learning outcomes. In Elizabeth's case, the instructional context encouraged her to chat in ways that seemed to support her increasing approximation of academic discourse. This outcome highlights the potential for chat-based instruction to support a wider range of student interactions and learning outcomes than is often assumed to be the case. A shifting emphasis from interpersonal conversation to academic discourse around literary texts does not require abandoning text-based chat. Instead, this shift calls for strategically adapting the use of chat to support currently desired learning outcomes.

Chapter Six
What's going on here? A frame analysis of transfer between chatting and speaking

In Chapter Four, I presented Xiao as a case in which social, informal, and often playful interactions in chat supported the strengthening of a friendship that spanned online and offline environments, thus facilitating transfer between chatting and speaking. In Chapter Five I presented Elizabeth as a case in which much more academic interactions in chat supported transfer of specific linguistic and grammatical structures from chat-based activities to subsequent oral discussions. In this chapter I attempt to contextualize these two cases by comparing their outcomes not just with each other, but with my greater body of data collected over multiple semesters. One goal of this comparison will be to illuminate the ways and degree to which Xiao and Elizabeth might represent general phenomena as opposed to unique cases.

An obvious difference between the two cases of Xiao and Elizabeth is that while Xiao was voluntarily participating in late-night tutoring from his home, Elizabeth was engaging in required instructional activities as part of an on-campus Spanish course. However, as will become clear throughout this chapter, this difference in instructional configurations does not always coincide with the different outcomes represented by Xiao and Elizabeth. In this chapter I will illustrate that even when students engage in chat as part of required, on-campus instruction, they still sometimes engage in the sort of play and social bonding exemplified by Xiao (see also e.g., Abrams, 2003b; Vandergriff & Fuchs, 2009; Warner, 2004). Similarly, I will show that the sort of academic chatting and transfer of linguistic items exemplified by Elizabeth occurred during multiple rounds of data collection, including a subsequent, optional tutoring project during which students chatted in the evening from home (see also Shin, 2006).

 The fact that the same instructional configuration of chat-based instruction can result in such widely differing communicative practices and transfer outcomes begs for asking, "What is it that's going on here?" (Goffman, 1974, p. 8). In this chapter, I use the sociological and sociolinguistic construct of *framing* (Bateson, 1972; Goffman, 1974; Tannen, 1993b) to explore this question. This investigation further supports the notion that "otherwise physically similar contexts can be *framed* as quite different social realities" (Engle et al., 2011, p. 604), and that these different framings can influence not only whether or not transfer will occur, but also what specific learning and prior experiences transfer. Furthermore, I highlight that the framing of chat-based instruction comes from multiple sources, three of which I discuss in detail: the *instructional framing* that instructors and instructional materials attempt to establish; the *interactional framing* that emerges through student interactions as they react to, and sometimes resist, instructional intentions; and the *mediational framing* that results from students prior experiences with and assumptions about chat-based interactions.

In comparing and contrasting the cases of Xiao and Elizabeth with one another and with the rest of my data, I am able to describe two phenomena regarding not only what learning and development outcomes "transfer out" from chatting to subsequent face-to-face interactions, but also the communicative practices that students "transfer in" to chat-based activities (see Dyson, 1999; Schwartz et al., 2005 on transfer "in" and "out"). First, when chat activities are framed as primarily social interactions, students may transfer in playful communicative norms which can support the development of interpersonal bonds. These bonds can then transfer out to face-to-face situations and facilitate oral language use. Second, when chatting is framed as intimately related to other course materials and activities, students may transfer in more academic

communicative norms, and then transfer the ideas, linguistic constructions, and speech acts they develop and practice online back out to subsequent oral activities.

Framing and transfer

Discussions of framing often start by considering how, in any given interaction, one answers the question, "What is it that's going on here?" (Goffman, 1974, p. 8). That is, what metacommunicative information do we perceive that leads to our interpretation of the type of interaction taking place and how we are expected to behave? For example, should a comment be interpreted as a playful joke or a threatening insult? Or when somebody asks us, "What can I do for you?" how do we know the range of appropriate responses? (Bateson, 1972).

For the purpose of transfer, it seems especially appropriate to consider the question, "what does this remind me of?" (cf. Ross, 1984). As Tannen (1993a) explains, frames are the perceivable features of a context that index schemas of interactions developed through prior experiences in somehow similar interactions and contexts (see also Bourdieu, 1977). Frames therefore indicate what type of interaction we are engaged in at any given moment by reminding us of previous instances of that type of interaction. Framing is thus intimately related to *intercontextuality*, or perceived connections between contexts (Engle, 2006; Floriani, 1994; Gee & Green, 1998; Leander, 2001; see also e.g. Lemke, 1997 on the related notion of intertextuality). The framing of a context guides our interpretation of it and informs our behaviors in it by "connecting it to other [contexts] which our community, or our individual history, has made us see as relevant to the meaning of the present one" (Lemke, 1997, p. 50). In terms of transfer, Pea (1987) explains that "perceived similarity is fundamental. What matters is how [a] new situation is connected with the thinker's trace of a previous situation" (p. 647).

Language plays a fundamental role in framing contexts as intercontextually linked to others. As the Laboratory of Comparative Human Cognition (1983) explains, "When language encodes the relevant relation between distinct contexts, the contexts are no longer distinct" (p. 341). This premise is supported by research that has shown the strong power of hints for facilitating transfer (Catrambone & Holyoak, 1989; Gick & Holyoak, 1980, 1983; Spencer & Weisberg, 1986).

Linguistic framing generally takes place during interactions as interlocutors negotiate and shift frames on the fly by changing topics, switching registers, altering the relationships between participants, or enacting some other type of change in footing (Goffman, 1981; Tannen & Wallet, 1987/2006). In this chapter I refer to these dynamic shifts in frames as *interactional framing*. The role of interactional framing in transfer has been illustrated by Hammer, Elby, Scherr & Redish (2005). The authors present a case in which three physics students negotiate the framing of a task, eventually deciding that it calls for intuitive and kinesthetic sense making rather than algebraic calculations. Upon establishing this frame, the students then transferred in an appropriate set of cognitive resources that included personal experiences related to the situation depicted in the task as well as more gestural communicative norms.

In addition to framing that dynamically emerges through interaction, instructors and instructional materials can also use language to explicitly attempt to frame contexts as intercontextually linked. Engle and her colleagues have observed in classrooms and reproduced in a tutoring experiment the way what I refer to as *instructional framing* can influence transfer with K-12 learners of life sciences (Engle, 2006; Engle et al., 2011). These researchers have shown that transfer is more likely to occur when instructors frame learning activities

"expansively" by relating them to students' past and future experiences, both inside and outside of school, and by positioning students as accountable for the knowledge they generate.

Given my distinction between interactional framing and instructional framing, it is necessary to recognize the potential for misalignment between the two. For example, an instructor might explicitly tell a class that they are going to engage in an open-ended discussion in which everyone's opinion is equally valued and students are expected to generate knowledge together to learn from one another. However, while leading the discussion, the instructor may inadvertently slip into a typical initiation-response-evaluation discourse pattern based on known-answer questions (Mehan, 1979), thus interactionally reframing the so-called discussion as an activity in which students are to display individual knowledge to be evaluated by the teacher. In such a case, the interactional framing might end up being a much greater source of intercontextuality than the instructional framing.

To this point, I have focused on framing that occurs through language. However, language is by no means the only source of framing and intercontextuality in a context. Bateson (1972) initially introduced the metaphor of a frame to describe the cues in a context that guide one's interpretation of that context similar to the way a physical frame around a painting indicates to the viewer that what is inside the frame is to be looked at with a different set of intentions and expectations than the surrounding wall outside the frame. He also includes examples of the way a theatre, stage, and audience physically frame the interpretations of the events that take place on that stage, or the way the physical setting of a shop frames the interactions that take place between shopkeeper and client. Similarly, Goffman (1959) discusses the role of artifacts, such as uniforms, in framing interpersonal interactions by indexing expectations about the behaviors of the uniform wearer. He also claims that specific objects can be crucial in framing, such as the way in which toys and sports equipment are "prone to evoke play" (Goffman, 1974, p. 43).

The notion that artifacts provide a source of intercontextuality is empirically supported by studies that have shown that transfer is more likely when physical features overlap between learning and transfer contexts (e.g., Catrambone & Holyoak, 1989; Spencer & Weisberg, 1986). However, in claiming that artifacts can frame contexts as related, I do not propose that there is inherent meaning in picture frames, stages, uniforms, toys, etc. Instead, I propose that artifacts can become "representations of practice" (Hand & Mendelson, 2011) that have been ascribed meanings through their repeated use in social interactions. As Pea (1987) explains, "contexts are *not* defined in terms of physical features of settings, but in terms of the *meanings* of these settings constructed by the people present" (p. 46).

In investigating transfer between CMC and oral communication in foreign language instruction, the framing role of artifacts, such as computers and software interfaces, is especially relevant. In particular, in the same way that a bounded book may trigger different communicative expectations than a newspaper or a magazine, the medium of communication used during learning activities likely frames those activities as intercontextually linked to prior uses of that medium. In this chapter, I refer to this phenomenon as *mediational framing*, which I view as closely related to Steven Thorne's (2003) notion of "cultures-of-use." In his research on the use CMC in French classes at the university level, Thorne found that students' previous experiences using CMC, both inside and outside of school, influenced the way they used CMC for class activities. For example, students with ample experience chatting tended to display extremely informal norms of interaction during chat-based activities (see also Lantolf & Thorne, 2006). Rather than suggesting that chatting was inherently informal (cf. Baron, 2000; Crystal, 2006),

Thorne argued that continued use of chat led it to take on a specific culture of use: because students tended to use chat for informal, social communication outside of class, the use of chat in class implicitly framed chat-based activities as intercontextually linked to those outside of school experiences, leading to transfer in of informal interactional norms. However, Thorne (2003) explains that culture of use "are dynamic and will necessarily evolve in relation to the object of an individual or collective activity" (p. 57). In other words, while the chat medium might initially lead students to transfer in their out-of-school communicative norms, with extended use in an academic setting, chat can take on a more academic culture-of-use, as was exemplified by Elizabeth in Chapter Five.

Transfer between chatting and speaking: Interpersonal bonds and linguistic content

Here I briefly review the small number of studies on transfer between chatting and speaking whose findings are particularly relevant to those presented in this chapter. Specifically, I return to those studies that present transfer outcomes similar to the two recurring patterns in my own data: (1) transfer of interpersonal bonds; and (2) transfer of specific linguistic forms and communicative functions. I encourage interested readers to return to Chapter Two for a more exhaustive review. I also remind my readers that the greater body of research on transfer between chatting and speaking has generally done more to argue that transfer does or does not occur as opposed to actually illustrating what exactly transferred. The small number of studies reviewed here represent exceptions to this general trend.

Transfer of interpersonal bonds. In Chapter Four, I showed that Xiao's strengthening friendship with Anthony, both in the chatroom and the classroom, contributed to his self-reported increase in speaking Spanish. Beauvois' (1997b) seminal work was the first to propose the possibility that chat-based instruction "connects [students] affectively and intellectually" (p. 109) and that these connections may play a mediating role in oral language development. She followed this study with a related one in which students reported that chatting helped them get to know their classmates better, which increased their comfort and motivation to speak to their classmates in the target language (Beauvois, 1998b). Hudson and Bruckman (2002) reported a similar findings in quoting a student as saying, "[Now,] when I see some of the people outside of class, I'll say something in French to them. The friendships that were built though the chatroom has given me the confidence to speak more" (p. 129). Abrams (2003b) linked the transfer of interpersonal bonds more directly to online play in reporting that students developed a sense of camaraderie through playful teasing that started in the chatroom and then transferred out to playful face-to-face interactions in the target language. Together these findings suggest that Xiao's experience may be shared by other students. In this chapter I consider additional episodes from my data that point to the transfer of interpersonal bonds as a factor in transfer between chatting and speaking. My analysis of these episodes highlights the role of mediational and interactional framing in shaping this outcome.

Transfer of linguistic content. In Chapter Five I showed that Elizabeth's online practice expressing opinions transferred to her subsequent performance of this speech act during classroom discussions. Examples in which Elizabeth used the exact words and structures across media are reminiscent of Compton's (2002) finding that when students were asked to give oral presentations immediately after chatting, they often orally repeated specific linguistic items and constructions that they or their chatmates had previously used online. Similarly, Shamsudin and Nesi (2006) investigated the use of chat in a course on English for specific purposes in which

students engaged in chat-based tasks designed to mimic oral interviews and meetings. Later in the course, when students actually participated in oral versions of these types of interactions, they reported using some of the same vocabulary and phrases they had learned from chatting. Sykes (2005) analyzed the development of specific speech acts – making and declining invitations – and found that students who practiced these speech acts in text-based chat prior to an oral performance outperformed those who practiced the same speech acts through other media (either face-to-face or voice chat). Together, these findings clearly illustrate that specific words, structures, and speech acts can transfer from chatting to speaking. Furthermore, in all of these studies, as was the case for Elizabeth, chat-based instruction was framed to be intimately related to subsequent oral activities. In this chapter, I present additional illustrations of transfer of linguistic content while connecting this outcome to both instructional and interactional framing that emphasize chat-based activities and oral activities as related to one another.

Methodology

Because this chapter draws from data that spans my entire dissertation project, I encourage readers to revisit my methods chapter (Chapter Three) for a detailed explanation of this study. In this section, I limit my discussion of methods to a brief overview of my data collection and explanation of my analysis.

Data collection

Data collection spanned three years and took place in the Spanish department of a large public university on the west coast of the United States. While some rounds of data collection focused on optional, online tutoring (e.g., Xiao's case) other rounds focused on required chat-based instruction that was integrated into traditional, on-campus courses (e.g., Elizabeth's case). During online tutoring, I was always the tutor and the researcher. During classroom instruction, for some rounds I was both the instructor and researcher, while during others I observed the classrooms of colleagues in the department. Table 6.1 (next page) provides a timeline and overview of all data collection. As shown in the table, in addition to the data collection that took place during instruction and/or tutoring, I also continued to conduct follow-up interviews after other rounds of data collection.

Analysis

Goffman (1974) explains that frame analysis does not address "the structure of social life but the structure of experience individuals have at any moment in their social lives" (p. 13). As an approach that is concerned with the perspectives and experiences of individuals in a given context, it is well aligned with ecological perspectives on SLA research (Kramsch, 2002a). My application of frame analysis to transfer between chatting and speaking attempts to understand the ways in which students experienced specific instantiations of chat-based instruction and how those experiences influenced what communicative norms they transferred in to chatting and what learning and development they then transferred back out to face-to-face encounters in the L2.

My analysis for this chapter consisted of two different stages. First, through comparative analysis of language use both online (through chatlogs) and oral (through transcripts and self-reports in the case of Xiao), I identified multiple manifestations of transfer. Then, through

78

analysis of framing, I attempted to link these transfer episodes to their specific contexts as perceived by the individuals involved. This second stage has relied heavily on discourse analysis of not only logs and transcripts of student language use, but also of instructors and instructional materials. Of particular importance has been analysis of intercontextuality, or references to connections between different contexts (see especially Engle, 2006; Engle et al., 2011; Gee & Green, 1998). This second stage of analysis has also depended heavily on interviews with students, both semi-structured and stimulated recall, as ultimately it is their perceptions of relationships between contexts that are of utmost importance in frame analysis and transfer (Pea, 1987).

Table 6.1: Data collection timeline

Time period	Settings	Participants	Data
Spring 2008	Chatrooms during online tutoring.	Approximately 10 Spanish 2 students from various sections; some were my former students. Included Xiao.	Chat logs; interviews; surveys.
Spring 2009	Classrooms during oral presentations and reading discussions; computer labs during chat-based instruction and reading discussions; chatrooms during chat-based instruction.	A single section of Spanish 2 for which I was not the instructor	Fieldnotes; audio and video of oral presentations and reading discussions; chat logs; audio and video of chat-based instruction in computer labs; interviews; surveys.
Fall 2009 & Spring 2010	Classrooms during oral discussions, presentations and exams; computer labs during chat-based instruction; chatrooms during chat-based instruction.	Fall: my section of Spanish 3. Included Elizabeth. Spring: my section of Spanish 2.	Partial fieldnotes; audio and video of oral presentations and reading discussions; audio of oral exams; chat logs; audio and video of chat-based instruction in computer labs; surveys.
Fall 2010	Classrooms during oral reading discussions; chatrooms during online tutoring.	Approximately 10 Spanish 3 students from various sections.	Fieldnotes; audio of oral reading discussions; chat logs; interviews; surveys.
Spring 2011-	NA	Former students and online tutoring participants.	Interviews; surveys.

Findings

I organize my findings into two main sections, each of which is then further divided into two sub-sections. First, I focus on required chat-based instruction that took place in on-campus computer labs in an attempt to compare Elizabeth's experience (Chapter Five) with those of other students. In this first section I look specifically at the mediational framing that seems to facilitate playful interactions early in semesters, and then the instructional framing that establishes intercontextuality between the chatroom and the classroom. The second section of findings then turns to framing and transfer during optional, online tutoring, where I compare

79

Xiao's case (Chapter Four) with the rest of my data. In that section I explore the ways in which mediational, instructional, and interactional framing intermingle, as frames shift and cultures-of-use emerge. I also present some additional evidence of the type of social bonding through online play exemplified by Xiao.

Required chat-based instruction in on-campus computer labs

This first section is further organized into two sub-sections. First I look at mediational framing and online play, and then I turn to instructional framing and intercontextuality between the chatroom and the classroom.

Mediational framing: Online play in the computer lab

Chapter Five focused on Elizabeth's academic chatting over the course of her semester-long Spanish 3 class during which multiple class sessions took place in and on-campus computer lab and included chat-based activities. As a counter example to her academic interactions, I presented an illustration of some of her mildly playful and joking interactions from the first session that disappeared later in the semester. Elizabeth's outcome is similar to Beauvois' (1998a) finding that "there was also more off-topic coversation...of a social nature in the first lab session than in any of the subsequent sessions" (p. 6). As reported in Chapter Five, Elizabeth suggested that her more playful chatting early in the semester likely related to her prior experiences with chat: "I do remember in the first chat because we didn't really know what was going on, making jokes in chat is something people are familiar with, so maybe that was a way to make the activity more familiar was to joke around."

Elizabeth's experience is a clear illustration of what I refer to in this chapter as mediational framing. The medium itself, in this case online chat, provides a source of intercontextuality with prior experiences with that medium, and facilitates transfer in of the communicative practices used during those prior experiences. In the case of students asked for the first time to chat in an instructional setting, to the degree that their prior experiences in chat have been social, informal, and playful (Baron, 2000; Crystal, 2006), it may be expected that they will engage in similarly playful interactions during chat-based instruction, at least until a local culture-of-use emerges (Thorne, 2003).

Indeed, during all three semesters in which I collected data from chat-based instruction in on-campus computer labs, there were examples of students like Elizabeth that reflected this sort of mediational framing during the first chat of a semester. One example came from spring 2009, the semester prior to Elizabeth's case, when I worked in collaboration with another instructor, Lara, in implementing a series of chat-based activities in her class. After our first visit to the computer lab, Lara actually expressed concern over the level of playfulness of one of the groups, but these concerns faded, along with the overtly playful behaviors, over the rest of the semester.

A few minutes in to that first chat session, four girls sitting in different parts of the lab broke into laughter, nodding and pointing at one another and at their screens (Figure 6.1, next page). Other students glanced at them, trying to see what was going on in their chat.

Figure 6.1: Laughter in the computer lab

Later I compared the timestamps on the chat logs with my video recording of the session and found that the biggest laugh came from Amy's bolded turn below in which she made a literal Spanish translation of the commonly used English chat acronym LOL (laughing out loud) into REVA (riendo en voz alta):

Grace	lol
Grace	oh uhhh reyendo en voz alta
	oh uhhh laughing out loud
Amy	**REVA**
	LOL
Amy	jaja
	haha

The creation of REVA and the laughter it produced illustrates the playful way in which these girls interacted in this chat. The way this online joke spread into the physical computer lab through laughter and gestures is similar to the online/offline playful teasing reported by Abrams (2003b). The fact that some of these students continued to use the acronym throughout this session and once more later in the semester is suggestive of social bonding that occurs through the creation of shared discourse practices in online communities (Baym, 1995; Cherny, 1999; Donath, 1998).

As a researcher, and having already seen a potential link between online play and relationship development as exemplified by Xiao and Anthony (Chapter Four), I was actually encouraged by this incident. The instructor, however, was concerned that this sort of interaction was inconsistent with the goals of the course. In her eyes, the students were inappropriately drawing on their out-of-school experiences with chat rather than acting accordingly to the expectations of her class:

Simplemente tomaron la actividad como si fuera un chat con sus amigos que no tenía ningún propósito dentro de la clase de español. Esto me parece algo nocivo. (…) La mayor parte del dialogo consistió en funciones fáticas con expresiones del chat en ingles. *The simply treated the activity like it was a chat among friends that had nothing to do with Spanish class. This seems harmful/dangerous to me. (…) Most of their dialogue consists of phatic functions and expressions from chatting in English.*

I also interviewed three of the four students involved in this incident, and to some extent they agreed with the instructor. While they did refer to the interaction as "fun" and Amy in particular mentioned that the play "got [them] more comfortable" with one another, they also acknowledged their behaviors as off-task. Grace described their play as a "digression" that "distracted" them from "the actual class activity," and Amy was apologetic of the incident, saying she and her classmates were "completely off topic." Their comments also spoke to the role of mediational framing and intercontextuality in their online play. Amy was quite explicit in stating, "We were just talking like we would in AIM [a widely used instant messaging platform] or something." Grace added, "I definitely feel that there was some level of informality and disconnect from -- say if we were discussing the class exercise in a live classroom setting." It seems that for these students the use of text-based chat called for familiar and informal communicative norms in part because they felt as if the activity was disconnected from their classroom experience. Throughout the rest of the semester, there were still some playful comments, including later use of "REVA," but never anything else that troubled the instructor as off-task.

In spring of 2010, the semester after Elizabeth's case, I again collected data in my own classroom, and again observed many more playful and off-task interactions during the first chat of the semester than later in the semester. One particular example from that session illustrates how students' play included playing with affordances of the chat interface, such as the ability to include a variety of emoticons. In this case, the medium is not simply a cue to transfer in playful communicative norms, but is actually used as the object of play, similar to the way in which a toy or ball might invite playful behaviors (Goffman, 1974, p. 43). In this stretch, despite Katrina's reference to their Spanish class, the students' playful use of emoticons shows greater attunement to the affordances of the specific medium than to expectations of the instructional activity.

Katherine	esta clase es muy divertida *this class is very fun*
Nadine	si! 🙂 *yes*
Katherine	😎
Nadine	🙆
Dylan	🏴
Katherine	haha me gusta el pirate *haha I like the pirate*
Dylan	yo tambien *me too*
Katherine	🕶️emo
Nadine	heheh

Whether playing with the interface, playing with translations of familiar chat-based utterances, or making playful and off-topic comments, the students I worked with engaged in more of these overtly playful behaviors during the first session of the semester than later in that semester (see also, Beauvois, 1998a). According to some of those who I was able to interview, during the first chat they "were not used to [chatting] in class" (Amy) and "didn't really know what was going on" (Elizabeth). Under these circumstances, it seems that the medium itself can be the biggest source of familiarity between chat-based instruction and prior experiences. Accordingly, these students defaulted to their familiar online communicative norms, which included making jokes and playing.

The question then becomes what changed after the first chat? Why didn't these students continue to play throughout the semester as Xiao and Anthony had done during my first tutoring project? As I reported in Chapter Five, Elizabeth attributed the fading of her playful online behaviors to two different aspects of the overall context of her Spanish course. First, as she got to know her classmates better, and they had opportunities for social interactions in class, "the get to know you, have fun chatting together aspect of the chat wasn't really there anymore because it was so much more immediate in [class]". Second, Elizabeth later saw chatting for class as quite different from her prior experiences with chat, in great part because of the way chatlogs were kept and integrated into subsequent classroom activities:

> Chatting, because it was an assignment, made it feel less casual, first of all, because you're never assigned to talk to someone in an English class like, now go online and chat or whatever. Like just the awareness that it was to practice grammar might have something to do with it, and also like, the fact that we would print out the conversations after and like go over the grammar, like usually when you're chatting in English your not as conscious of that sort of thing, I mean, not even just the grammatical aspect but you never expect to read it again, it's just like a momentary thing and then it's gone, like dwelling over it was sort of an unnatural thing.

My "unnatural" practice of incorporating chatlogs into subsequent in-class lessons seemed especially striking for her, and was perhaps crucial in overshadowing the initial mediational framing that invited students to play. The physical printouts of chatlogs eliminated the ephemeral qualities that Elizabeth had previously associated with chat. The presence of the physical artifact of the printout created a strong intercontextual link between the chatroom and the classroom, perhaps reinforcing the relationship between the communicative practices used in each (cf. Brandt & Clinton, 2002; Wenger, 1998).

Additionally, as several students commented in later interviews, the integration of the printouts into subsequent class activities drove home to the students that the logs were being read by their instructor. Despite the fact that neither I nor Lara (during spring 2009) actually participated in the chats, the students were very aware of the instructor's presence as an audience member, thus creating an additional intercontextual link between chatroom and classroom. According to Elizabeth, "we knew we were being watched." Amber, a student who had been in Lara's class in spring of 2009 and my class in fall 2009, echoed that during chats she "felt the need to try to use correct grammar, or use complete sentences [because] I'm being monitored by my GSI [instructor]." Elizabeth was so aware of my virtual presence in the chats that she posed the question, "are we supposed to be talking to each other or are we supposed to be acting out this skit online for you?"

One major contributor to the eventual absence of playful and off-task behavior in my computer-lab data therefore seems to be that the permanent record of the chatlogs removed the

students' "concealment track" (Goffman, 1974, p. 382) in which under other circumstances they would have been able to engage in "out-of-frame" behaviors (Goffman, 1974, chapter 7). In fact, according to Elizabeth, it was easier for her and her classmates to conceal their off-task behaviors from me in the classroom than in the chatroom:

> It was so much easier for us to talk [socially] in person, but partly because in class when you weren't around we would switch to English a bit more ((laughs)) …
> [In the classroom] it's easier to see where you are ((laughs)). On the computer you're sort of like big brother. And you're always going to read through whatever, like you're always going to see everything that happens.

It is noteworthy that for Elizabeth and some of her classmates, chatting, a medium generally assumed to be informal and social (e.g., Baron, 2000; Crystal, 2006), actually became more restrictive than the traditional classroom when the students knew that their interactions were being recorded and then integrated into the classroom setting.[14]

Instructional framing: Intercontexual links between chatroom and classroom

The inclusion of chatlogs in subsequent class sessions was one way in which chat-based instruction was framed to create intercontextuality between the chatroom and the classroom. In part because of the amount of play observed during my first visit to the computer lab with Lara's class (spring 2009), subsequent chat-based activities were designed to provide more explicit expectations for student interactions (such as specifying linguistic forms and communicative functions to be used; see Chapter Five), and to maximize continuity between these activities and the classroom activities that preceded and followed visits to the computer lab. One particular type of activity that explicitly attempted to frame chatting and subsequent use of oral Spanish as intercontextuality linked involved combining chatting and speaking during the same class period (cf. Compton, 2002). In Chapter Five I provided an example of one such activity in which students discussed a text in chat before orally discussing that same text right in the computer lab. Here I present a similar activity from that same semester that more explicitly embodies the way in which intercontextuality was framed into instruction through the language used in the handout and by me as the instructor. My comparative analysis of the chat logs and the transcriptions of the oral discussions from this session and others like it shows many examples of students orally reproducing aspects of utterances they first composed in chat. In this section I discuss the possible role of instructional framing in this immediate transfer of ideas and linguistic constructions, while also considering the more academic communicative norms that students transfer in to the chatroom.

For this particular activity, the students read a short story by Hernando Téllez titled *Espuma y nada más* (Just Lather, That's all) for homework the day before class was to be held in the computer-lab. The next day in the lab, the first half of the session was spent with students text-chatting in groups about the reading assignment, and the second half consisted of a whole-class discussion of the reading right in the computer lab. Figure 6.2 (next page) shows a translation of the handout that was used during this activity. The original version of the handout is included in Appendix 6.1.

---

[14] In a comparison of online and in-class group activities in a foreign language class, Vandergriff and Fuchs (2009) found similar levels of playful interactions in both environments.

Just Lather, That's All: Chat and oral discussion

You all have approximately 20 minutes to chat about the following:

> 1. Do a detailed analysis of line 122 of the story:
>   "They told me you would kill me. I came here to confirm it."
>
>   Consider the following:
>   - If Captain Torres knew the barber wanted to kill him, why did he go to the barber shop?
>   - Why didn't the barber kill the captain? What are the implications of not having done so?
>
> 2. Are there heroes and villains in this story? Who are they?

At 11:30-11:35 we will start the oral discussion about these same questions.

Figure 6.2: Handout from computer-lab activity (translated)

The title on the handout framed the chat and oral discussion as related to one another and to the story, and the last line of the handout further linked these two activities in time and in terms of the topic of discussion. Additionally, as the instructor of the course and facilitator for this activity, as I led the oral discussion I attempted to frame it as related to the chat, and to hold students accountable for the ideas they had been generating:

> Todos han leído el cuento, todos han chateado casi media hora sobre el cuento. ¿Que ideas tienen? ¿Por qué se atreva a ir a la barbaría sabiendo que el barbero a lo mejor quiere matarlo? Yo sé que muchos de ustedes chatearon sobre esto.
> *Everyone read the story, everyone has chatted for close to half an hour about the story. What ideas do you have? Why does he dare go to the barber shop knowing that the barber may want to kill him? I know that many of you chatted about this.*

Between the handout and my language during the discussion, the instructional framing of this activity positioned the chatting and speaking as two parts of the same activity, and the students were expected to be accountable in the second part for what they had done during the first part. The instructional framing of this class session creates intercontextuality between these instances of chatting and speaking consistent with the expansive framing that Engle and her colleagues have linked to transfer (Engle, 2006; Engle et al., 2011).

During this session many students orally reproduced aspects of what they had first posted in chat. Table 6.2 (next page) shows three examples of this immediate transfer in which students articulated an opinion about the text in chat before re-articulating that same opinion during the oral discussion.

85

Table 6.2: Examples of immediate transfer from November 6, 2009

Student	in chat	in discussion
Elizabeth	es possible que el capitán tenga...uncountable (guilt) porque he matado muchos personas *it's possible that the captain had...uncountable (guilt) because he's killed many people*	Creo que es posible que el capitán siente, ¿Como se dice guilt? *I think that it's possible that the captain feels, how do you say guilt?*
Jordan	en mi opinion, el capitan parece a demonstrar el hecho que nadie puede le matar. como un acto de poder. *in my opinion, the captain seems to demonstrate the fact that nobody can kill him. like an act of power.*	Pienso que era un acto de poder en el parte del capitán de quiere demonstrar, or um, quise demonstrar que nadie puede matar, nadie puede matarlo. *I think it was an act of power on the part of the captain of wanting to show, or that he wanted to show that nobody can kill him.*
Robert	pienso que el barbero no queria ser recordado como un asesinato *I think that the barber didn't want to be remembered as an assassin.*	Pienso que el barbero quería matar al capitán pero el no quería ser recordando como un asesino. *I think that the barber wanted to kill the captain but he didn't want to be remembered as an assassin.*

Across my three semesters of data collection in on-campus computer labs, I conducted six sessions similar to this one, and found this sort of immediate transfer to be very common. During those six sessions, close to half of students' oral utterances during post-chat discussions repeated some aspect of chat messages. Students repeated themselves and their chatmates, sometimes word for word and sometimes paraphrasing.

Comments from interviews and anonymous evaluations from this activity show that at least some students perceived the instructionally framed intercontextuality between the two parts of the activity. As reported in Chapter Five, Elizabeth said, "I remember being quite focused on preparing myself for the discussions while chatting, I think because I believed that was part of the point of the chat." Amber echoed:

> I was aware that what we were chatting about during the session would tie into our discussion in the second half of class. I felt that the discussions afterward were pretty much to ask what we discussed during our chats, and I came to expect that.

Anonymous evaluations included comments such as, "Chatting first helped me organize my ideas before speaking" and "It prepares our opinions for vocal discussions." Clearly the instructional framing of this activity gave at least some students the message that what they did online and what they subsequently did offline were intimately related, and that ideas generated in the chat were to be shared during the oral discussion. Accordingly, students transferred their ideas and linguistic constructions from the chat to the discussion.

Of additional interest in the 3 examples provided in Table 6.2 is the academic nature of the students' chat messages, each using subordination to express an opinion about the text (see Elizabeth's case in Chapter Five for more on academic chatting). It seems that the instructional framing of the activity not only established intercontextuality between chatting and the

immediately following oral discussion, but also established intercontextuality between the chat and prior academic activities. Students made explicit references to the handout (e.g., "Hay alguien que sabe el significado de la linea 122?" [*Does anyone know what line 122 means?*]), and incorporated their knowledge from other courses into the discussion (e.g., "Soy pensando un poquito en los teorias de Nitsche…ha leido algo de el?" [*I'm thinking a bit about Nietzsche's theories…have you read anything by him?*]). The communicative norms that students transferred in to this activity were clearly more academic than playful. This activity and others like it suggest that chat-based instruction can be framed to establish intercontextuality between chatting, other class activities, and prior academic interactions. When this framing is established, students seem more likely to transfer in academic communicative norms and to transfer out ideas and linguistic constructions developed while chatting.

Optional online tutoring

This section is again divided into two sub-sections. First I consider the way in which framing during online tutoring differentially influenced the level of playfulness during chat sessions. Then I turn to episodes that speak to Xiao's experience of interpersonal bonding and the transfer of those bonds offline.

Framing and online tutoring: To play or not to play

So far I have argued that chat-based activities that take place in on-campus computer labs can be instructionally framed in ways that encourage students to interpret those activities as intimately linked to other aspects of their language classes, and to therefore engage in communicative practices they associate with academic settings rather than those practices they associate with chatting in their first language. I have illustrated this phenomenon through examples of student-student online interactions that are much more academic than playful, and through the disappearance of online play after the first session of a semester.

Xiao and Anthony represent a stark contrast in that they engaged in playful interactions throughout a semester-long tutoring project. In Chapter Four I presented their mutual teasing and collaborative jokes as an indicator of their strengthening friendship. These two engaged in many additional types of explicit play as well, ranging from Anthony's translation of a typical children's joke from English into Spanish early in the semester, to Xiao's humorous inclusion of a line from a contemporary hip-hop song towards the end of the project (Table 6.3).

Table 6.3: Examples of Xiao and Anthony's jokes

Session 4	Anthony:	? por que cruza el camino el ave? *why did the chicken cross the road?*
Session 21	Xiao:	te voy a comprar un bebido (como t-pain) *I'm going to buy you a drink (like t-pain)*
	Xiao:	"ima buy u a draaank"

In fact, during the 6th session of the semester Xiao referred to himself as "slacking off" by continuing to participate in the chat past 11pm instead of doing his homework for his other courses. For Xiao and Anthony, the chat sessions seemed to represent a playful and social break from their more serious schoolwork.

There are multiple fairly obvious differences between the tutoring project and computer-lab activities that could contribute to the much more playful interactions I observed that semester. Students volunteered for tutoring, but were required to participate in computer-lab activities. Students engaged in tutoring late in the evening, and generally from home, as opposed to during their normally scheduled class periods and on campus. Students' online tutor was a researcher without the power to grade them, while the facilitator of computer-lab activities was generally their actual instructor.[15] In summary, while online tutoring did explicitly focus on course related topics and content, there were many fewer intercontextual links between tutoring sessions and the classroom than between computer-lab sessions and the classroom.

However, a partial replication of my initial tutoring project complicates any assumptions that the primary difference between the outcomes illustrated by Xiao and Anthony and those illustrated by Elizabeth and others are due simply to the difference between optional tutoring and required class activities. Here I present a second round of online tutoring that was characterized by interactions that were much more academic than playful, and then return to Xiao and Anthony to illuminate the interactional framing that may have provided a crucial source of playfulness throughout that semester. These two cases of online tutoring illustrate an interesting contrast between the maintenance of a playful culture-of-use during my initial tutoring project and the emergence of a much more academic culture of use during its replication (Thorne, 2003).

During the fall semester of 2010, I conducted another tutoring project in the same Spanish department, but with a small number of differences. First, I worked with third instead of second semester students. Second, instead of following a fixed weekly schedule, chats either took place on evenings when students had a reading assignment for homework and focused explicitly on those readings, or took place on evenings before an exam and focused on reviewing the readings that students would be asked to write about on the exam. Third, unlike my initial study, this iteration of the tutoring project included classroom observations of in-class reading discussions the day after chats that had focused on those readings. In total, a small group of students and I chatted 10 times over the semester and I observed each of the Spanish 3 classes attended by these students six times. Additional details on this round of data collection were presented in Chapter Three.

Unlike the prior tutoring project in which Xiao and Anthony used the chats as a playful and social arena throughout the semester, during this second tutoring project chat interactions were generally on-task and academic in nature. Even during the first chat of the semester, these students stayed focused on the academic aspects of the chat rather than playing during the first session as I had observed in prior semesters of computer-lab activities (see above and Beauvois, 1998a). This first session took place the evening before the students' first exam of the semester. The topic of this session, as I had communicated to the students through email, was "the two readings you've had so far from Pasajes [the course reader] (Como agua para chocolate [an excerpt from a Mexican novel] and El nieto [a short Cuban story]). I will also be happy to help with other topics you may want to review for the next day's exam." My message clearly framed the chat as intercontextually linked to the course through its topic and relevance to the upcoming in-class event.

Early in this first session, while I was still engaging in introductions and identifying students' names and which classes they were in, the students appeared to be more interested in

---

[15] There was one session from spring 2009 for which Lara was absent and I, as a researcher, acted as the primary facilitator, but for all other computer-lab sessions the students' instructor was present and in a leadership role.

starting an academic discussion. Here are some examples of their comments from the first few minutes of the session:

Ahmad	vamos a empezar psajes literature?
	are were going to start (discussing) Pasajes Literature (the course reader).
Talia	tendremos que comparar las dos historias de pasajes?
	will we have to compare the two stories (on the exam)?
Manpreet	como va a pregunatar sobre estos cuentos en el examen?
	how is the exam going to ask about the stories?

Especially comments that made explicit reference to the next day's exam show the role that the timing of this chat likely played in creating a high degree of intercontextuality between the chat session and the next day's class. Despite this being the students' first experience chatting in Spanish, rather than transferring in playful communicative norms they were more focused on taking advantage of this chat as preparation for their exam the next day. It is also interesting to consider the interactional framing in play as through their comments the students quickly proposed moving out of an introductory frame and into a more academic frame.

The entire chat session was in many ways more reminiscent of an in-class literary discussion than an informal chat. Here's one particularly illustrative excerpt in which the students and I co-construct the idea that these two texts could perhaps be considered metaphors for the historical events that were taking place when the texts were written (some turns have been omitted).

amendelson	que saben del contexto historico de los dos cuentos?
	what do you guys know about the historical context of these two stories?
Sharon	el nieto es depsues una revolucion en cuba
	"el nieto" is after a revolution in Cuba
Camille	y como agua para chocolate es por la revolucion mexicana
	and "como agua para chocolate" is by/about the Mexican revolution
Sharon	en ambos cuentos hay un tiempo con conflictos
	in both stories there is a time of conflict
guest4278792	Hay dos revoluciones
	there are two revolutions
amendelson	en los dos casos el tema de la revolucion es importante
	in both cases the theme of revolution is important
Talia	que tipo de revolucion hay en como agua para chocolate
	what type of revolution is there in "como agua para chocolate"
Denise	de la familia?
	of the family?
Manpreet	de la tradición
	of tradition
Denise	o revlucion de mexico
	or the revolution of Mexico
Sharon	si, asi cuando tita desobedecia a su madre, es como las personas del pais que en el revolucion
	yes, so when tita disobeys her mother, it's like the people of the country that are in revolution
amendelson	sharon, si
	sharon, yes
amendelson	es interesante pensar en las relaciones interpersonales como micro-

	representaciones de lo que está pasando en un nivel mas grande
	it's interesting to think in the interpersonal relations as micro-representations of what's happening on a larger level
Manpreet	si
	yes
Sharon	tita y las ciudadanos peleaban contra de tradiciones viejos
	tita and the citizen were fighting against old traditions
amendelson	quizas sharon
	maybe sharon
Denise	el revolucion real reflejo la revolucion en la familia sobre la tradición
	the real revolution reflects the revolution in the family over tradition
Manpreet	el revolucion de mexio y de la familia
	the revolution of Mexico and of the family
Denise	bueno idea manpreet
	good idea manpreet
Manpreet	Gracias
	thanks
guest4278792	La turbelencia de la casa es connectada a la turbelencia en todo el pais
	the turbulence in the house is connected to the turbulence in the whole country

Making these connections to the historical context of the readings became a recurring practice in the chats. In the above example, I asked the question that brought in the historical context, but by later in the semester the students began to do so unprompted. For example, during the fifth chat of the semester, a discussion of two poems, Manpreet reminded the group, "Tambien, es importante nos damos cuenta de periodo cuando los poemas publicaron" (*Also, it's important to realize the period when the poems were published).* Considering the historical context of texts became part of the emerging culture-of-use of these chat sessions (Thorne, 2003), a culture-of-use very unlike the playful and social communicative norms that students frequently transfer in to foreign language chat sessions.

Another recurring practice during this semester-long project was referring to specific lines of the texts during the discussion, a practice associated much more with in-class literary discussions than out-of-class chatting. As was the case with bringing in the historical context, this practice was initiated by me in the chats. For example, during the second session of the semester as students described one of the characters of the short story we had read, I asked them to provide specific references (some turns have been omitted).

amendelson	sharon, donde dice que era cocinero? en que linea?
	sharon, where does it say he was a cook? in what line?
Sharon	perdoname, estaba un carnicero
	sorry, he was a butcher
Sharon	en la linea 81
	in line 81
amendelson	bien. y que mas sabemos de el?
	good. and what else do we know about him?
Camille	grita y golpea la mujer
	he yells and hits his wife
amendelson	bien, camille, en que linea esta eso?
	good camille, what line is that in?
Camille	linea 85
	line 85

Also similar to our practice of considering the historical context, by later in the semester students referred to specific lines without being prompted to do so. In fact, by the very next session Camille referred Manpreet to specific lines in response to the question Manpreet had asked about the poem we were discussing.

Manpreet	yo no entiendo como la jaula es entre de el hombre y la mujer
	I don't understand how the cage is between the man and the woman
Camille	quiza en las lineas 10-12 es mas claro
	maybe it's clearer in lines 10-12

This recurring practice of referring to specific lines of the texts both reflected and reinforced the high degree of intercontextuality that was established between the chat sessions and the classroom activity of reading and discussing these texts. My instructional framing of the chat-based tutoring sections proposed this intercontextuality and the students' recurrent engagement in this practice showed their uptake and perpetuation of this framing (Engle et al., 2011).

There were other manifestations of the academic nature of these chat-based tutoring sessions as well. Similar to Elizabeth (Chapter Five), during these sessions students often expressed opinions through subordination. In the following example from session 6 Jill did so while also connecting to the historical context of the play we were discussing.

| Jill | pienso que la relacion entre la mujer y su empleada es un buen ejemple de los relaciones entre los clases en paises latinoamericanes |
| | *I think the relationship between the woman and her employee/servant is a good example of the relationships between classess in Latinamerican countries* |

Students also sometimes brought in relevant knowledge from their other courses, similar to the reference to Nietzsche I presented above as an indicator of academic chat during computer-lab activities. One student in particular, Camille, displayed this behavior multiple times by referring to her other classes and bringing in ideas from them, such as "Freud y su teoria de melancholia" (Freud and his theory of melancholy; session 3) and "Hegel y su esclava" (Hegel and his slave; session 5).

Also similar to Elizabeth and other students during my rounds of data collection that included oral discussions in computer labs right after chatting, students who participated in this tutoring project sometimes repeated ideas from the chats during the oral class discussions the next day (see also Mendelson, 2010 on similar repetitions when students engaged in asynchronous forums the night before reading discussions). Here I provide two examples from a chat that focused on two poems that were discussed in class the following day. In the first example, Marcos provided his interpretation of the title of one of the poems, "Me gustas cuando callas" which translates somewhat ambiguously to either *"I like you when you are silent"* or *"I like you when you shut up"*. (turns omitted):

Adam	por que creen que dice "me gustas cuando callas"?
	why do you guys think he says, "I like when you are silent/shut up?
marcos	si un hombre le gusta una chica porque "me gustas cuando callas", les encanta todo sobre ella
	if a man like a girl because "I like you when you are silent/shut up", he likes everything about her

marcos	porque ella no tiene que decirle nada para llamar su atencion
	because she doesn't have tos ay anything to get his attention

The next day in class, when his instructor asked for interpretations of the title, he said something quite similar:

> Primero cuando leí este frase (…) yo pensaba que era como mal. (…) Pero después, yo pienso que, el hombre, me gusta cuando callas es como si ella no necesita decir nada para estar en la atención para, de él.
>
> *First when I read this frase (…) I thought it was like bad. (…) But later, I thought, the man, I like you when you are silent is like she doesn't to say anything to have his attention.*

In this second example, as we neared the end of our discussion of the other poem and the students had shared their interpretations, I shared my interpretation of a line that makes reference to a man and woman spending 30 minutes together.

Adam	ustedes quieren saber mi interpretacion de la media hora?
	do you guys want to know my interpretation of the half hour?
Manpreet	si
	yes
Camille	si
	yes
Adam	no pretendo que sea la interpretacion correcta
	I don't claim that it's the correct interpretation
Adam	pero creo que tiene validez
	but I think it has some validity
Adam	yo creo que ella es prostituta
	i think she's a prostitute
Marcos	si
	yes
Camille	interesante
	interesting
Amelia	o si, interesante
	oh yes, interesting
Manpreet	yo pienso este pero ella es en una jaula
	I think/thought that but she is in a cage
Adam	y la jaula representa la explotacion y opresion de las mujeres en una sociedad machista
	and the cage represents the exploitation and oppression of women in a sexist society

The next day in class when the same line was discussed and the instructor asked how many students perceived a sexual connotation, Amelia shared this same interpretation orally: "yo pienso que ella es una prostituta y es like ella esta atrapado en el negocio" (*I think she is a prostitute and it's like she's trapped in the business*).

While these examples illustrate that this phenomenon of oral repetitions of ideas and language from the prior night chat certainly did occur during this tutoring project, there were many fewer examples from the project than from my computer-lab data. This difference in the amount of transfer can be understood in terms of differential framings and levels of intercontextuality. When students repeated themselves orally right after chatting in the computer

lab not only was the chat explicitly framed as preparation for the immediately following oral discussion, but the oral discussions also made reference directly back to the chats (see example given above). Additionally, the prompts for both the chat and the oral discussion came from the same instructor, and the two types of interactions took place in the same physical space within the same unit of time (a class period). In contrast, during this online tutoring project, which I certainly attempted to frame as applicable to the next days' discussions, the instructors did not make reference back to the chats. In fact, while they knew that the online tutoring was taking place and had agreed to the in-class observations, they did not know which, if any, of their particular students were participating. Furthermore, while all of the instructors discussed the same texts on the same days, they used a variety of approaches and instructional activities in working with the texts. In the two examples of repetitions given here, the instructor had orally asked questions that were quite similar to the questions I had asked in chat the night before, providing a particularly high degree of intercontextuality between that particular chat and discussion. However, the chats and in-class discussions were not always this strongly aligned.

Having provided multiple illustrations of the academic nature of these online tutoring sessions, I also want to highlight the general absence of evidence of mediational framing leading to the transfer in of playful communicative norms. With the exception of a very small number of isolated jokes, and occasional emoticon use, these chats look very little like those in which Xiao and Anthony participated or those that are so commonly reported in the research literature (e.g., Baron, 2000; Crystal, 2006; Danet, 2001). The high degree of intercontextuality established between these chats and the students' course certainly played a role here, but comments from one particular student highlight another factor. Camille, who appears in several of the excerpts in this section, was the most active participant during this tutoring project, in terms of both number of chats attended and level of participation during those chats. On a survey at the beginning of the semester, Camille indicated that she rarely engaged in online chatting. In an email interview later in the project, I asked her for more detail about her prior experiences with online communication and chatting in particular. She said the following.

> I generally use email to communicate with people, and the emails can be anywhere from a few words to a page or so. Most of my email communication is with group members for student organizations, although I do use it to keep in contact with a few friends who no longer go to Berkeley. I do text in English, but not as much as some people, since my phone is pretty old and it takes me forever to write a sentence. I've used Google Talk and MSN Messenger [two chat platforms] with classmates when we're working on projects, but this is usually the last resort if we can't meet in person. It's hard to reach a consensus using online chat because I guess people can't really read each other's nonverbal cues. There are lots of interruptions, new topics being launched, people going AWOL, etc. That being said, we do get the work done, so online chat isn't a complete hindrance. I just find it mildly annoying at times.

Her comments on chatting are telling for multiple reasons. In contrast to the ubiquity of out-of-school chatting by college-age students reported by many researchers (e.g., Lamy & Hampel, 2007; Ortega, 2009), Camille seems to be a clear exception. Not only did she report chatting infrequently, those experiences were for academic rather than social purposes, and she found them to be more "annoying" than fun or enjoyable. Camille's comments complicate my suggestion that the mediational framing of chatting potentially cues students to transfer in social

and playful communicative norms. In Camille's case, no such norms had been established. Her experience highlights that even mediational framing and cultures-of-use, which seemingly emphasize the artifacts involved in communication, are still very much relational phenomena. For mediational framing to influence communicative norms, the communicators must already have an established relationship to the medium. Clearly Camille is a single student, and many of the other students during this project did indicate that they were experienced chatters. However, given her prominent level of participation in the chats, it is possible that her absence of playful communicative norms contributed to the overall framing of the chat sessions as primarily academic.

My second tutoring project clearly illustrates that this sort of instructional configuration, in which students are voluntarily chatting with a tutor (not their actual instructor) outside of class, can yield highly academic interactions. The stark contrast between this tutoring project and the prior, much more playful one through which Xiao and Anthony further developed and maintained their friendship, invites returning to that first iteration of online tutoring. Further analysis of my initial study reveals that while there were efforts to create intercontextuality between the chatroom and the classroom (e.g., discussing course topics, activities, and assessments; completing textbook exercises), multiple participants (myself included) contributed to a fairly continuous interactional framing that maintained a playful cultural of use.

During the initial study, when I introduced classroom activities or topics, Xiao and Anthony sometimes responded playfully, engaging one another in expressions of laughter (see Chapter Four). Here I present a detailed analysis of one of these instances in which I joined them in shifting from an academic to a more playful frame. That is, my explicit attempts to instructionally frame the activities as academic where accompanied by my implicit uptake and maintenance of the playful frame Xiao and Anthony proposed. In the following stretch from the 12th session of the semester, I attempted to instructionally frame the chat as relevant to class by asking the students about buying music, a topic from the current textbook chapter on shopping. Here, Xiao responds by saying that he never downloads free music, and then adds a "*cough*" to indicate he is joking. Anthony then teases Xiao for not knowing how to say "cough" in Spanish, and there are multiple expressions of laughter.

amendelson	ustedes compran musica, o solo descargan musica gratuita?
	do you all buy music, or only download free music?
Xiao	er oficialmente, nunca escargo musica gratuita
	um, offically I never download free music
David	um... descargo muscia gratuita
	um, I download free music
amendelson:	bien Xiao
	good Xiao
David	pero, es legal
	but it's legal
amendelson	🙂
Xiao	*cough*
David	haha
Anthony	*TOS* (xiao)
	COUGH (xiao)
Xiao	*tos*
	cough
Xiao	lo siento
	sorry

Anthony	lol..... acabas de aprenderlo
	lol... you just learned that
Xiao	recientemente, no
	not recently
Anthony	el capitulo pasado
	last chapter
amendelson	**jaja**
	haha
Xiao	LO QUE SEA ANTHONY, dios mio
	WHATEVER ANTHONY, my god
amendelson	**jajaj**
	haha
Anthony	lol
David	lol

Xiao and Anthony interpreted this chat session as an appropriate venue to engage in informal and playful interactions despite my instructional framing of the chat as related to class. However, it is clear that they were not the only ones transferring in communicative norms associated with informal chatting. I both used an emoticon (🙂), and expressed laughter in response to Xiao and Anthony's teasing. In doing so, I implicitly validated their playful behavior. In fact, examples of my role in informal interactional framing are common in my data from throughout the semester. One time Anthony entered the chat as "Anthony the Magnifico" and I greeted him by saying, "hola su majestad, gracias por alegrarnos con su presencia [(hello your majesty, thank you for gracing us with your presence)]". After the group decided that we would all take on alternate names, I asked Anthony to suggest a name for me which I then adopted for the rest of the session: Adam del Pais Madre (*Adam of the Mother Land*). As the tutor, and relative authority figure in the group, my participation in this playful episode legitimized these behaviors and helped frame interactions in the chat as playful.

There were times when the initial tutoring project was framed not only as more informal than academic, but perhaps actually as oppositional to Xiao and Anthony's current class. As described in Chapter Four, early in the semester Xiao regularly voiced criticisms of his class, and explained that part of his initial motivation for participating in tutoring was that it provided opportunities to practice that were absent in class. At times these criticisms were accompanied by aligning himself more closely to the class I had taught the prior semester than to his current class. For example, once when he and a former classmate were commiserating about wanting more opportunities to practice speaking Spanish, he expressed a longing for the prior semester: "ay, les extraño a nuestros companeros de clase mucho" (*oh, I miss our classmates a lot*). Xiao's use of "nuestro" (*our*) is especially suggestive of the emergence of an us/them distinction during the tutoring project that separated the chat sessions from the classrooms. For Xiao, the chats represented a potential reprise from school, not necessarily because they took place through a social and informal medium, but because they provided an opportunity to practice Spanish with classmates (and a former instructor) who shared his learning goals, to complain about his other classes, and sometimes simply to "slack off." It is clear that despite any explicit attempts to create intercontextuality between the tutoring sessions and the students' classrooms, I played a role in this division both through my participation in interactional framing and as a representation of a classroom that was different from Xiao's current one.

In comparing my two iterations of online tutoring projects, the medium itself, being the same in both, seemed to play little part in defining the communicative norms that were used.

Xiao and Anthony engaged in playful and social interactions not because they were chatting, but because the chats came to represent an alternative to class. In contrast, for Camille and her chatmates the chats were much more aligned with what they were doing in class, and thus called for more academic interactions.

Framing and relationship development

The strongest transfer-related claim I made in Chapter Four was that Xiao and Anthony's online interactions played a role in their increasing comfort and willingness to speak Spanish with one another in person (see also Beauvois, 1997b; Hudson & Bruckman, 2002). As Xiao explained:

> I think the most important factor for me in a language class is feeling good about interacting with my classmates and practicing with them. (…) [The chat] facilitated that connection that I made with the other students in our class, making speaking to them easier in person. The people I felt most comfortable practicing and speaking Spanish to were the students who I ended up knowing on contexts outside of class - either during the chat, or in another class, or just talking to them on campus.

As documented both here and in Chapter Four, many of these comfort-building interactions were playful ones with Anthony. Not surprisingly, a full year after the tutoring project Xiao told me that some of his fondest memories of studying Spanish at the university were "hilarious conversations" with Anthony as they "tried to translate English slang into Spanish using textbook vocabulary." Xiao also felt that his out-of-class practice with Anthony had perhaps been what had best prepared him to use Spanish during his subsequent experiences teaching in a California high school with a large population of Spanish-speaking students.

Xiao and Anthony's friendship and subsequent oral Spanish use is by far the strongest example in my data of the potential role of chat in supporting the development and maintenance of interpersonal relationships that facilitate speaking the target language. My data do include a small number of more isolated episodes that point at the possibility of a more generalizable phenomenon in which online play supports this sort of interpersonal bonding that can lead to more comfortable student-student interactions.

In my discussion of mediational framing and play (above), I presented an example from spring 2009 in which a group of girls laughed heartily as they playfully translated LOL (laughing out loud) into REVA (riéndose en voz alta). During interviews, one of them explained that their online play "got [them] more comfortable" with one another. During subsequent visits to their class, I noticed that some of the girls involved in that particular incident increasingly sat and worked together in class, and sometimes had similar eruptions of laughter. I was never able to learn as much about their friendships as I did about the one between Xiao and Anthony, but it is possible that these girls' online play had some part in their subsequent face-to-face interactions.

I also presented Elizabeth's playful interactions from the first chat of fall 2009 (see also Chapter Five). In addition to Elizabeth's jokes, there were some other signs of interpersonal bonding intertwined with the groups' online play. For example, when Elizabeth joked about being too busy to eat, Amala responded, "Elizabeth, vienes a mi casa y te cocinare la comida" (*come to my house and I will cook for you*). Towards the end of the session, Lisa then proposed that one day all three of the chatters should go to San Francisco together. During a later

interview, Elizabeth explained that she had not interpreted these statements as felicitous invitations, but rather as part of the joking play they had engaged in throughout the session, and that she did later meet with some students outside of class for study sessions, but not for purely social events. Even so, this episode does still point to some connection between online play and interpersonal bonding (Baym, 2010; Danet, 2001).

Throughout this chapter (see Chapter Five also) I have reported that in the computer-lab, playful behaviors greatly decreased after the first session of the semester (see also Beauvois, 1998a). It is therefore noteworthy that my strongest examples of interpersonal bonding while chatting in the computer-lab also come from first sessions. Above I attributed the disappearance of online play to instructional framing that led to the students to perceive chat-based instruction as intimately linked to other academic activities. Including printouts of chatlogs in subsequent classes appeared to be a particularly strong source of this intercontextuality between chatroom and classroom. While decreasing off-task behaviors and increasing academic language use during chatting were goals of my instructional design, it also seems possible my instructional framing may have undermined the type of online interpersonal relationship development exemplified by Xiao and Anthony.

This outcome is not necessarily a negative one – at least according to Elizabeth she and her classmates had more time and freedom to socialize in class than in chats anyway. But it is interesting to consider that the development and maintenance of relationships and comfort between students may be outcomes that can be facilitated or undermined by instructional framing; they are not outcomes that necessarily emerge from the medium. Towards the end of one of my interviews with Elizabeth, she touched on this. As she explained to me how much more formal chatting seemed to her than interacting with her classmates in person, I admitted that I was surprised, in great part because of research that reported the benefits of chatting on student-student relationships (e.g., Beauvois, 1997b; Hudson & Bruckman, 2002). She responded, "If you had been telling us to bond socially or something like that, we probably would have. But in school that's not usually what we're expected to do." This comment suggests that Elizabeth was very much attuned to the instructor's expectations while chatting, and acted accordingly. For her, chats were instructionally framed as academic tasks. In contrast, during the initial tutoring project, chats were interactionally framed as a playful and social reprise from the classroom. Given my participation in this framing, it is likely that Xiao and Anthony's playful interactions also reflected their attunement to my expectations as a tutor.

Discussion: Interrogating mediational framing

Early in this chapter I introduced the notion of mediational framing to refer to the idea that the use of a particular medium of communication can create intercontextuality with prior uses of that medium, facilitating transfer of communicative norms associated with the medium into subsequent interactions (Thorne, 2003). This notion seems especially relevant to considering transfer between text-based chatting and oral communication in foreign languages given findings that suggest that the informal communicative norms associated with chatting (Baron, 2000; Crystal, 2006) support the development of interpersonal bonds that facilitate subsequent face-to-face interactions (Abrams, 2003b; Beauvois, 1997b; Hudson & Bruckman, 2002, see also Chapter Four). Examples from early in this chapter partially support this premise: Elizabeth reported that her early semester play stemmed from the fact that "making jokes in chat is something people are familiar with," and Amy suggested that she and her classmates treated their

first session in the computer lab as if they were "just talking like we would in AIM [a widely used instant messaging platform]." Both of these students also suggested that their online play helped them become more comfortable with their classmates, and in the case of Amy she and her classmates were increasingly observed speaking Spanish to one another after chatting. Xiao and Anthony also seem to support this premise in that they similarly interacted playfully in chat, and then increasingly reported using Spanish together during class and in their free time. However, analysis of my role as tutor in the case of Xiao and Anthony reveals that the medium (chat) was not the only relevant source of framing as I clearly participated in interactionally framing the online tutoring sessions as informal and social.

In contrast to the play that often characterized groups' first visits to the computer lab, and an entire semester of online tutoring with Xiao and Anthony, the rest of my data general reflect the use of more formal communicative norms during chat-based activities, even when the exact same chat platform was used, and even during a subsequent, optional tutoring project. In general it seems that instructionally framing chat-based activities as intimately related to other class activities communicated to the students that they were expected to complete the assigned task. In the case of chats that were immediately followed by oral discussions, the instructional framing also communicated to students that they would later be expected to orally share the ideas generated during the chat. Indeed, the chat logs from most activities contain almost no evidence of play and many students did transfer ideas and linguistic constructions developed in chat out to subsequent oral discussions.

This outcome indicates that the instructional framing of chat-based activities can potentially be a more powerful source of intercontextuality than the mediational framing of using chat. Elizabeth's comment that "if [I] had been telling [the students] to bond socially or something like that, [they] probably would have" speaks directly to this issue. For her, the mediational framing of chat-based activities did not lead to transferring in informal communicative norms once the instructional framing had clearly established that a different set of behaviors were called for. This claim is consistent with my earlier suggestion that in Xiao and Anthony's case the medium was not the only source of informality during online tutoring because of the way that I, as the tutor, participated in interactionally framing the chats as social and playful. In both of these cases, the students seemed to be attuned to the communicative norms that the instructor or tutor expected, and they behaved accordingly.

If mediational framing can be overshadowed by instructional framing, then what actually accounts for the playful interactions that took place early in semesters in the computer lab (Beauvois, 1998a)? Again, interviews with Amy and Elizabeth provide the best explanation: the first time students go to computer labs, they are unaccustomed to chatting for academic purposes, and not knowing what else to do, they default to their familiar and informal chatting norms. Similarly, it must also be asked what accounted for the lack of play during the first session of my second iteration of online tutoring? Here I see two possible and compatible explanations. First, because that first session was explicitly framed as preparation for an exam the next day, any lack of familiarity with academic chatting was probably overshadowed by the students' drive to do well on the exam, as illustrated by the way in which they hurried me to start the literary discussion while I was initially focused on making sure that everyone knew one another. Second, the most active student during that second iteration of online tutoring, Camille, had minimal experiences chatting, and the few that she did have involved working on school projects. At least in her case, she seemed not to have an informal culture-of-use to default to.

The widely differing outcomes discussed in this chapter, in which some chat-based activities were interpreted as play and others as schoolwork, complicates the idea that chatting, or perhaps any medium for that matter, has a singular culture-of-use for any given user. While a book, for example, may result in different expectations than a newspaper, all books do not ultimately produce the same expectations. We may anticipate that a novel will entertain us while an edited volume will inform us despite the fact that as physical artifacts, or as examples of communication media, both appear highly similar. Indeed, it is the language in the book, the interactional framing (or instructional framing in the case of a textbook), which accounts for our different expectations. Perhaps as chat continues to become increasingly common in academic settings, students are able to recognize and switch between different frames as appropriate, independently of the specific medium. Perhaps it is only when instructors fail to communicate and establish clear expectations that students fall back on their out-of-school communicative norms. And even then, only those students experienced with chatting for social and informal purposes will transfer in informal and playful communicative norms.

Conclusion

Just as previous research has shown that metacommunicatively framing contexts as intercontextually linked facilitates transfer between those contexts (Engle, 2006; Engle et al., 2011; Hammer et al., 2005), I have attempted to show in this chapter that framing plays a similar role in transfer between chatting and speaking in computer-mediated foreign language instruction. In addition to addressing the type of interactional and instructional framing discussed in prior work on transfer, I have also introduced mediational framing by considering the intercontextuality established by including CMC in instruction.

My data suggest that framing influences both what prior experiences are transferred in to chat-based activities and what sort of development transfers out. Specifically, when these activities are framed primarily as informal and social interactions, students may transfer in playful communicative norms that support the development of interpersonal relationships that can then transfer out to face-to-face opportunities for orally practicing the target language. In contrast, when the framing of chat-based activities establish strong intercontextuality with other aspects of instruction, students may transfer in more formal and intentional communicative norms, and the ideas and linguistic constructions they develop online can transfer out to related oral discussions. Finally, in the absence of instructional framing that links chat activities to other aspects of class, or when instruction does not provide clear expectations for students' communicative norms, students may default to more playful cultures-of-use that they have developed through their personal and social uses of CMC (Thorne, 2003).

The primary pedagogical implication of this study is that learning and transfer outcomes of computer-mediated instruction depend on how CMC is used (Warschauer, 2000). For purely communicative approaches that rely on students feeling comfortable enough with one another to practice speaking the target language, CMC-based activities can be framed to encourage playful interactions, or students can be given opportunities to use familiar communication technologies without many instructional constraints other than an expectation to use the target language. In more functional or pragmatic approaches, CMC-based activities can be framed as opportunities to work with linguistic forms and communicative functions being taught in class, and as preparation for future use of these forms and functions during oral activities (e.g., Sykes, 2005, see also Chapter Five).

So far I have discussed the framing of chat-based instruction as somewhat of an either/or situation in which it is either framed socially or framed academically. One important question is if both framings can be achieved simultaneously. That is, can chat-based instruction be designed to facilitate interpersonal bonding and comfort between students while also targeting specific linguistic forms and communicative functions? For example, in Sykes' (2005) study, she reported that chat-based instruction that provided opportunities for practicing inviting and declining invitations, a primarily social speech act, facilitated the oral development of this speech act. An interesting question is if the online practice with this social speech act also facilitated social bonding between students or if they were too focused on completing the task to also engage in relationship development. Certainly more research would be needed to explore this question.

Another important question that will need to be addressed by future research is the possible role of the short-term transfer of linguistic content reported here in longer-term trajectories of foreign language development. To what extent is this short-term transfer related to findings that chatting can lead to gains in oral proficiency over the course of a semester (Beauvois, 1997b; C. Blake, 2009; Hirotani, 2009; Payne & Ross, 2005; Payne & Whitney, 2002; Satar & Özdener, 2008)? In what ways might repeating orally what was first uttered in chat be beneficial for learning a foreign language? It has been argued that cross-modal processing supports language acquisition (Sykes, 2005), and that practice shifting between different genres of communication can lead to greater flexibility and adaptability when faced with unfamiliar situations (Cope & Kalantzis, 1993; New London Group, 1996), but these potential benefits will need to be investigated empirically through additional analysis of existing data as well as the design of future studies.

Chapter Seven
Conclusion

The goal of this dissertation was to further understanding of transfer between text-based chat and oral communication in foreign languages. To pursue this goal, I conducted a detailed exploration of a small number of cases of transfer between chatting and speaking in close relation to the contexts in which they occurred. I view this multi-case study as a complement to experimental and quasi-experimental work that has consistently shown that chatting can have a positive impact on speaking, but has provided few details regarding exactly what transfers and under what conditions (Beauvois, 1997b; C. Blake, 2009; Hirotani, 2009; Kost, 2004; Mehr et al., 2013; Payne & Whitney, 2002; Satar & Özdener, 2008; Sequeira, 2009). I have attempted to answer recent calls for greater attention to context in research on CMC for SLA (Ortega, 2009), and greater specification of the characteristics of chat-based instruction that yields specific learning outcomes (Lin et al., 2013). In doing so, I have illuminated some of the factors that can influence transfer between chatting and speaking, and identified characteristics of chat-based instruction that may successfully target certain outcomes.

I approached my research topic as an example of transfer-of-learning, defined as the influence of engagement in one activity on subsequent engagement in a different but related activity (Greeno et al., 1993). Transfer-of-learning is a rich area of investigation within the learning sciences, and this body of research provided me with theoretical constructs and methodological suggestions for how to conduct my investigation. Of special importance were Barnett & Ceci's (2002) taxonomy that provided an analytical lens for considering exactly what transferred and from what context to what context, and Beach's (1999) notion of collateral transitions as a particular type of transfer in which two (or more) simultaneous activities contribute to a single development trajectory. My adoption of the notion of collateral transition was crucial in informing my qualitative approach through which I tried to understand as much as possible about what my subjects did both online and offline, and how their experiences in each context mutually influenced one another (see also, Baym, 2006; Leander, 2008).

In this closing chapter, I summarize my key transfer-related findings, articulate my ecological explanation of them, and then present their pedagogical implications. I then turn to limitations in my work, methodological implications, and possible directions for future research.

Summary of findings

Chapters Four and Five each presented detailed cases of individual students who displayed transfer between chatting and speaking, but in very different ways. Xiao (Chapter Four) brought his familiar communicative norms from chatting socially in English to chatting in Spanish during a semester-long online tutoring project. In doing so, he contributed to framing these online interactions as playful and informal alternatives to studying. According to Xiao, these online interactions played a fundamental role in building a friendship with one of his classmates, Anthony. In turn, this friendship increasingly included speaking Spanish to one another, both in and out of class, sometimes as part of their studies and sometimes just for fun. A full year after the tutoring project, Xiao remembered speaking Spanish with Anthony as one of the greatest contributors to his L2 development. Xiao's case illustrates transfer between chatting

and speaking in the form of interpersonal bonds that were formed and strengthened online, leading to increased opportunities and willingness to speak the language offline.

Elizabeth (Chapter Five) approached chatting in Spanish quite differently from Xiao. After seeing that her chatlogs were being collected, read, printed out, and integrated into subsequent classroom lessons, Elizabeth viewed chatting as an academic rather than social endeavor. Accordingly, the type of language she used while chatting was more reminiscent of a literary/academic discussion that might typically take place in a classroom than of the informal communicative norms often associated with chatting (Crystal, 2006). My analysis of Elizabeth's development of expressions of opinion in multi-clause sentences revealed two manifestations of transfer between chatting and speaking. First, Elizabeth practiced many variations of this speech act online before using them correctly orally. Second, she often articulated opinions in chat that she later repeated during oral discussions.

While Xiao and Elizabeth are individual cases of different transfer outcomes, when comparing their cases with others in my data (Chapter Six), they become potentially illustrative of more general patterns. These patterns are also supported by the existing research literature on CMC for SLA, although sometimes through isolated anecdotes.

With regard to interpersonal relationship development that occurs online and then facilitates offline target language use, Beauvois (1997b) first hypothesized this possible manifestation of transfer between chatting and speaking. Hudson & Bruckman (2002) later provided a student's self-report of the phenomenon: "[Now,] when I see some of the people outside of class, I'll say something in French to them. The friendships that were built though the chatroom has given me the confidence to speak more" (p. 129). In my data, Xiao represents by far the most detailed case of this transfer, but Chapter Six also included two additional episodes that point to this phenomenon. In particular, I presented the example of a group of girls who erupted with laughter as the result of their playful translation of LOL (laughing out loud) into REVA (riéndose en voz alta). From that point forward in the semester, some of these girls increasingly sat and worked together in class, and sometimes shared similar eruptions of laughter. While I was never able to learn much about the strength and history of these friendships, some of them did say in interviews that their off-task play was part of their process of becoming more comfortable with on another. My subsequent observations of their in-class interactions do suggest that their online comfort may have carried over. Together, my data along with the research literature provide a small handful of cases of this particular manifestation of transfer between chatting and speaking in which chatting may indirectly benefit oral language development by enabling students to bond in ways that support subsequent oral language use.

With regard to the transfer displayed by Elizabeth – practicing speech acts, and formulating ideas and linguistic constructions online before using and repeating them offline – there is a fair amount of evidence in the rest of my data and in the research literature that suggest her case is indicative of a more general phenomenon. Compton (2002) first reported that students often repeated their own and their chatmates' utterances when asked to engage in related oral activities immediately after chatting. Sykes (2005) found that students who practiced accepting and rejecting invitations in chat were better prepared to perform this speech act orally than students in other conditions. And Shamsudin & Nesi's (2006) subjects reported that during oral interviews they used words and phrases that they had first practiced in chat. These oral repetitions of utterances first constructed online were very common in my data. As reported in Chapter Six, when I had students engage in oral discussions immediately after chatting, close to half of their oral utterances displayed some form of repetition of prior chat utterances. My data

also include a smaller number of examples of these oral repetitions when students engaged in online chat (Chapter Six) or forums (Mendelson, 2010) the night before oral discussions. My dissertation therefore adds to a growing body of evidence of this form of transfer between chatting and speaking, especially over relatively short timescales.

Explanation of findings: An ecological perspective

The ecological perspective that informed this dissertation and is reinforced by my findings is one that views transfer as a fundamentally relational phenomenon. Transfer results from perceived relationships between an individual and the contexts in which he or she operates (Greeno et al., 1993 drawing on Gibson, 1986). At the same time, the individual is part of those contexts (Engle, 2006; Lave, 1988), which are defined not by their physical features, but by the people present and the meanings they ascribe to those features (Laboratory of Comparative Human Cognition, 1983; Pea, 1987). From this perspective, individual learners play active roles in shaping and defining the contexts in which they learn and transfer. This perspective lends itself nicely to adopting an analytical approach based on framing, understood as the process through which interlocutors use language, behavior, and culturally defined artifacts to negotiate a shared understanding of the meaning of a given context, and the relationship of that context to others (Bateson, 1972; Engle, 2006; Goffman, 1974; Tannen, 1993b).

Xiao's case (Chapter Four) is clearly illustrative of the active role learners take in shaping their own transfer outcomes. Despite the explicitly academic objectives of the online tutoring project in which they participated, Xiao and his increasingly good friend Anthony treated the chats as an alternative to their classroom. Accordingly, they drew on their prior experiences chatting in English for social purposes, and transferred playful communicative norms into the tutoring sessions. Their interactions proposed a playful frame that the rest of the chat participants (including myself as tutor and researcher) took up in more fully establishing this playful frame. Xiao was therefore a central agent in creating the context that fostered the development and maintenance of his friendship with Anthony. In turn, this friendship then became an affordance for speaking Spanish offline. As Xiao and Anthony became better friends, they also became increasingly common interlocutors for comfortable interactions in oral Spanish, both inside and outside their classrooms. Again we see Xiao as an active agent in creating the contexts to which his online experiences transferred (see also Bereiter, 1995). He did not necessarily transfer a static set of language skills and communicative dispositions, but rather a dynamic set of skills and dispositions in relation to a particular interlocutor, his friend Anthony. It was then their increasingly common oral interactions in Spanish that Xiao later claimed were crucial to the overall development of his ability to speak the language.

Elizabeth (Chapter Five) also entered her semester with strong associations of chatting as a playful form of communication. However, as she perceived a new relationship between chatting and her Spanish class, her relationship to chatting during online activities also changed. Elizabeth was clearly influenced by instructional framing that explicitly positioned chat-based instruction as intimately related to other classroom activities (Engle, 2006; Engle et al., 2011). Especially impactful for her was my instructional practice of incorporating printed chatlogs into subsequent lessons. As a result of her perception of chatting as an academic endeavor, she not only committed to staying on-task during online activities, but also drew on communicative norms familiar from literary discussions in her classes. Her actions reinforced an academic/literary frame during chat-based activities, thus contributing to the creation of an

environment that provided practice for subsequent in-class discussions. During those oral discussions, which she grew to perceive as continuations of online discussions, she then repeated ideas and linguistic items and structures that she had first articulated and used online. She also developed a more extensive and grammatically correct repertoire for performing a particular speech act (expressing opinions in subordinate clauses) that had been targeted throughout the semester both online and off.

Pedagogical implications: Flexibility of chat as a medium

The primary pedagogical implication that I want to highlight from this work is that text-based chat is a flexible medium of communication that can support a wide range of interactions, and therefore potentially facilitate a wide range of learning and transfer outcomes. My data illustrate that chat-based interactions certainly can exemplify their assumed informal, social, and playful nature (e.g., Crystal, 2006), but they can also take on a much more formal and academic feel and tone (Chapter Five). Furthermore, the strikingly different playful and literary/academic frames that recur in my data lead me to assume that a potentially infinite array of other frames can probably also be enacted through text-based chat.

In highlighting that chat is not necessarily playful, I do not wish to imply that playful interactions during chat-based instruction are necessarily problematic. To the contrary, in Xiao's case, informal, social, and playful online interactions seemed to play a fundamental role in his development of interpersonal relationships that supported subsequent oral language use (Abrams, 2003b; Baym, 2010; Danet, 2001). Others have also reported the potential pedagogical benefits of play for L2 development in both online (e.g., Warner, 2004) and classroom environments (e.g., Broner & Tarone, 2001; Lantolf, 1997). My dissertation therefore supports the premise that chat-based instruction that is framed playfully can be highly beneficial for supporting interpersonal bonding between students that can then indirectly support language development by increasing willingness to communicate among classmates (MacIntyre et al., 1998). This sort of play could potentially be designed into instruction, or chat activities could be left relatively unstructured with the expectation that students would draw on their pre-existing cultures-of-use, and transfer in the communicative norms they associate with chatting from their out-of-school experiences (Thorne, 2003).

My dissertation also shows that instruction can influence the types of interactions and frames that students enact during chat-based activities. Students may initially associate chatting with informal and playful communication, such that perhaps instructors should expect some degree of online play early in courses or during first visits to computer labs (e.g., Beauvois, 1998a). However, as was exemplified by Elizabeth's case (Chapter Five) as well as my second iteration of online tutoring (discussed in Chapter Six), cultures-of-use are dynamic and will evolve depending on the goals of the interactions being mediated through technology (Thorne, 2003). Elizabeth's case in particular illustrates how my instructional moves, such as designing online activities around literary analysis, requiring the use of particular forms and functions, and incorporating chatlogs into subsequent class activities, helped establish a different culture-of-use such that by later in the semester she (and her classmates discussed in Chapter Six) viewed chat-based instruction as more formal and academic than informal and playful.

When students align their online chatting with instructional framing that positions it as relevant to other aspects of their L2 development and use, chat-based instruction can successfully target specific communicative functions and their associated linguistic forms. As in the case of

Elizabeth, chatting can become an environment for targeted practice with specific functions and forms, and this practice can transfer to speaking. Research by Sykes (2005) as well as Shamsudin and Nesi (2006) supports this same proposition: when learners engage in online practice with particular communicative situations, they can successfully incorporate the results of that practice into their oral language use. Pedagogically, I am suggesting that essentially any communicative situation can be practiced in text-based chat, facilitating subsequent oral engagement in face-to-face versions of those practiced situations. This sort of focused chat-based instruction is perhaps especially valuable in L2 instruction that adopts a functional or for-specific-purposes approach (e.g., Shamsudin & Nesi, 2006).

Limitations and unanswered questions

Having proposed such broad pedagogical implications of this work, I must also recognize limitations. As a multiple-case study, my dataset does include examples of replication, most notably of the transfer I observed when chatting took place immediately prior to speaking and the two were instructionally framed as tightly related. But the fact that this phenomenon seems to generalize within my study does not necessarily mean that it generalizes to other populations (Yin, 2009). The multiple groups of students with whom I worked all came from the same department and institution, and in many cases had the same teacher or tutor: me. I have attempted to document and describe key aspects of the instructional contexts that yielded my findings, but as an insider in these contexts, it is possible that I am blinded to other factors that may also have shaped my data. I believe that if the activities I described in detail in Chapters Five and Six were implemented by other instructors in other institutions, similar learning and transfer outcomes may result; but I cannot know or guarantee those results. I have argued that learning and transfer outcomes are fundamentally shaped by their instructional contexts which in turn are shaped by the interactants and artifacts in those contexts. Incorporating my lesson designs into other instructional contexts certainly could influence those contexts, but would not define them.

Another noteworthy limitation is the absence of offline observational data in the case of Xiao (Chapter Four). Because this initial study was designed to explore online transformations that might illuminate potential explanations for prior findings of transfer between chatting and speaking, data collection was limited to the online environment. Only as self-reports of oral Spanish use became so frequent during chat sessions did this initial study truly become an investigation of transfer between chatting and speaking. Even then, while my subjects' well corroborated self-reports provide strong evidence that they increasingly spoke Spanish to one another, these reports do not enable me to know anything about the characteristics much less quality of their Spanish during these oral interactions (see also Lam, 2000). Certainly, combining online tutoring with offline observations (as was the case in my second iteration of tutoring, discussed in Chapter Six) would have yielded a richer dataset.

This limitation is perhaps compounded by the relative absence of replication of Xiao's outcome in the rest of my data. While I captured other episodes that potentially pointed to the role of playful chatting in building relationships that supported oral language use, I did not find the same level of replication of this finding as I did with key findings from Elizabeth's case (Chapter Five). I do not mean to imply that I know there were no other cases of the sort of friendship development and maintenance exemplified by Xiao and Anthony, but rather to state honestly that I am not aware of and did not capture other cases that were nearly as salient. This

fact may point to the relative uniqueness of Xiao's case (although see Beauvois, 1997b; Hudson & Bruckman, 2002). At the same time, the uniqueness of his case may also relate to the degree to which chat-based instruction was increasingly designed to explicitly connect to classroom instruction in subsequent rounds of data collection (as discussed in Chapter Six). In other words, it is possible that to some extent I designed potential replications of Xiao's case out of my dissertation through my attempts to establish a tighter relationship between classroom and chatroom in all subsequent rounds of data collection.

Having voiced these limitations, it is worth briefly revisiting my initial goals and the extent to which they were reached. I have successfully described specific cases of transfer between chatting and speaking and linked them to the overall instructional contexts in which they occurred. Within these cases, I have provided a great deal of specification regarding exactly what transferred, and from what context to what context. In the case of Elizabeth in particular (Chapter Five), I have also successfully captured this transfer as a collateral transition through detailed analysis of her language use in both the classroom and the chatroom (Beach, 1999). However, have I successfully bridged the gap I see between the pre and post-measures of experimental and quasi-experimental work on transfer between chatting and speaking (e.g., Beauvois, 1997b; C. Blake, 2009; Mehr et al., 2013; Payne & Whitney, 2002; Satar & Özdener, 2008; Sequeira, 2009)? These studies show an impact of chatting on speaking in the form of pre to post gains in experimental conditions. I have argued, however, that they fail to provide substantial understanding of what happens between those pre and post-measures, and have tried to position my dissertation as potentially filling this gap. Do the detailed cases of Xiao and Elizabeth represent potential learning and transfer trajectories of the subjects in those other studies? They may, or they may not. Perhaps relationship development is an underlying mediator of oral language use in those studies. Perhaps targeted practice with specific forms and functions contributes to the more general oral language development reported in those studies. And perhaps the many examples of immediate transfer I've documented together form semester-long trajectories similar to those of learners in other studies. But perhaps not. And while Xiao and Elizabeth very well may be exemplary of two examples of semester-long trajectories of transfer between chatting and speaking, it is highly likely that there are a wide range of other possible trajectories as well.

Methodological implications: Drawing on transfer-of-learning research

Despite the unanswered questions left by my dissertation, I do believe that I have provided an appropriate methodological approach for further investigation of them. First and foremost, given the nature of this line of inquiry, it is tremendously valuable to draw on the larger body of educational research on transfer of learning. For more than a century, educational psychologists, cognitive scientists, learning scientists and others have been trying to understand and design instruction to promote the phenomenon whereby learning generalizes beyond its immediate context (e.g., Judd, 1908; Thorndike & Woodworth, 1901). Research on the potential influence of chatting on speaking can certainly benefit from existing knowledge about transfer of learning. Yet, as far as I am aware, I am the first researcher of transfer between chatting and speaking to make use of this resource.

That said, I have been thrilled to see that a small number of researchers in the broader field of applied linguistics have also recently begun to incorporate transfer research into their work. In her review on "transfer of learning with respect to language learning," Diane Larsen-

Freeman (2013) reminds us that transfer is the goal of all foreign language instruction as we hope and expect that learners will be able to "utilize outside of the classroom that which they have worked so hard to attain within it" (p. 108). She too is drawn to ecological perspectives on transfer that view it as a relational phenomenon dependent on *affordances* between learners and their environment (Gibson, 1986; Greeno et al., 1993). She highlights recent work that pays greater attention to the perspective of the learner (e.g., Lobato, 2012), and that considers motivational and dispositional factors (e.g., Perkins & Salomon, 2012). Another example of the recent incorporation of transfer research into applied linguistics is Mark James' (e.g., 2014) work in TESOL. Like me, James draws on Barnett & Ceci's (2002) taxonomy for specifying what actually transfers, and from what context to what context. Among his findings is that transfer of L2 writing skills is highly dependent on the relationships that learners perceive between a given writing task and others that they have completed in the past (James, 2008).

It was my incorporation of transfer research that helped me see that experimental approaches were not ideal for investigating transfer between chatting and speaking. Experimental research on transfer depends on isolating activities such that outcomes can be attributed to one activity as opposed to another. But typical integrations of chatting into L2 instruction generally involve inserting some number of chat-based activities into a course that also includes other opportunities for oral language development (e.g., communicative activities, oral discussions, oral presentations, etc.). This sort of collateral transition, in which concurrent activities contribute to a developmental outcome, calls for an alternative to experimental approaches (Beach, 1999). Understanding transfer between chatting and speaking requires detailed qualitative analysis of what students do both online and offline, similar to the online/offline connective ethnography advocated by Leander (2008; see also Baym, 2006). It is also crucial to complement online and offline observations with interviews. If transfer is fundamentally shaped by potentially idiosyncratic perceptions of relationships between individuals, their environments, and their prior experiences (Greeno et al., 1993; Pea, 2004), it is crucial that transfer researchers capture those perceptions (Lobato, 2012). This methodological approach is most likely to uncover additional detailed cases of transfer between chatting and speaking in relation to its context. These additional cases would then complement mine (in addition to Lam, 2004) in more completely filling in the gap between pre and post-assessments of oral proficiency in courses that include chatting. In fact, I would suggest that there is no need for additional experimental work in this area because existing studies have compellingly shown that chatting can transfer to speaking. Instead, there is a need for more studies that can describe this finding in relation to its context so that this research can have a more direct impact on practice (Lin et al., 2013). Methodologically, I believe that my dissertation represents a productive step in this direction.

Future directions

I close my dissertation with a forward looking discussion of some of the possible future directions I see for research on transfer between chatting and speaking. These possibilities emerge from a combination of my own findings, and greater current trends influencing both L2 instruction and contemporary uses of CMC.

At times in this dissertation I have pit my two primary findings against one another, implying that chat can transfer to speaking either by supporting interpersonal relationship development or by providing targeted practice with functions and forms emphasized throughout the greater instructional context. One question worth exploring is how chat-based instruction

might yield both of these findings simultaneously. Could chatting be framed socially and academically at the same time? Or could students switch in and out of these frames over the course of a semester in ways that provide the benefits of both? One approach might involve combining optional, out-of-class chatting with structured, in-the-computer-lab chat activities. However, as illustrated through my second iteration of online tutoring (Chapter Six), even optional, out-of-class chatting can also embody an academic frame if the students perceive chatting as an extension of class. Perhaps it is therefore necessary to combine structured and unstructured chatting, or to actually design play into some activities. However, could chat activities maintain any semblance of an alternative-to-school status if they were instructionally designed to do so? Questions such as these illuminate the interesting tension between my two primary findings, and this tension strikes me as worthy of further exploration.

It could also be productive to explore the possibility of my findings arising, or being designed for, in areas of applied linguistics other than foreign language classrooms. For example, could text-based chat prior to study abroad experiences potentially support relationship development that would facilitate access to face-to-face social networks once in the study abroad destination? It has been suggested that a key mediator in successful language development during study abroad is establishing relationships with native speakers (Kinginger, 2004). Perhaps online chatting through intercultural collaborations could provide learners with a head start in establishing those relationships before travelling. Research on English language learners here in the United States has also pointed to the importance of establishing friendships in gaining access to and acquiring English as a second language (Gándara & Orfield, 2010; Norton, 2000; Olsen, 1997). Perhaps here too there is potential to use text-based chat as a way for learners to form and maintain these friendships. The pedagogical potential of chatting in both of these scenarios merits future investigation.

Today, text-based chat remains as prevalent in the lives of students as it was when I first began to conceptualize this dissertation, but platforms and devices have changed. Chatting has been fully integrated into social networking sites, such as Facebook, and these sites are increasingly accessed through mobile devices, thus blurring distinctions between chatting and texting (Baron, 2008; Crystal, 2008). Future research on transfer between chatting and speaking should consider how social networking might affect the phenomenon. Through social networking, CMC has become perhaps more grounded than ever in physical contexts. Online interactions represent just another channel of communication used to maintain otherwise offline relationships (Baym, 2010), and users create virtual traces of their physical happenings by *checking-in* at concrete locations and *tagging* the friends with whom they meet (Roick & Heuser, 2013; C. E. Smith, 2011). It could be fruitful to investigate how chatting through social networking platforms, such as Facebook, might transfer to using the language in the physical locations and with the offline friends that learners tag. Or how chatting through mobile devices from those same physical locations may play a role. These offline connections might further frame chat-based interactions as related and applicable to past and future experiences speaking the target language. I see great potential for exploring the transfer implications of online social networking in relation to current efforts to connect learners with target language contexts and communities through service and community-based language learning (e.g., Hellebrandt & Varona, 1999; O'Connor, 2012). Creating dual channels of online and offline interactions with target language communities could potentially increase the strength of community connections while enabling the two channels to synergistically support language development across them.

Another contemporary trend that may influence transfer between chatting and speaking in second and foreign languages is the amount of transfer between chatting and speaking that has become common for first language speakers of English. Many linguistic forms that originated in text-based environments, such as acronyms like LOL (laughing out loud) and OMG (oh my god), are now used in spoken English (Chatfield, 2013; Kinsella, 2010). In addition to the research that reports this trend, it is also strikingly salient in popular television programs and advertisements. This trend may suggest an increasing perceived fluidity between online and offline communication (Leander & Lewis, 2008). If learners have come to accept and expect that their L1 online language practices seep into their L1 oral interactions, they may be more likely to approach L2 chatting with similar expectations. In turn, this expectation that what happens online is applicable to what will later happen offline should further support transfer between chatting and speaking (Engle, 2006; Engle et al., 2012). So while instructional framing may still be crucial in connecting chat-based activities to other aspects of the curriculum, at a more general level, some students may already approach chat-based instruction with a culture-of-use that frames chatting and speaking as related. Future research would be required to understand these shifting dynamics around chatting and speaking, but this trend suggests that transfer between the two should become increasingly expected, and perhaps even commonplace. Again, it seems that there is little need for additional research that aims simply to determine whether or not chatting can or does transfer to speaking. Instead, we should focus greater efforts on investigating specific implementations of chat-based instruction in order to target specific and pedagogically desired transfer outcomes.

References

Abrams, Z. I. (2003a). The effect of synchronous and asynchronous CMC on oral performance in German. *Modern Language Journal, 87*(2), 157–167.

Abrams, Z. I. (2003b). Flaming in CMC: Prometheus' Fire or Inferno's? *CALICO Journal, 20*(2), 245-260.

Abrams, Z. I. (2008). Sociopragmatic Features of Learner-to-Learner Computer-Mediated Communication. *CALICO Journal, 26*(1), 1-27.

ACTFL. (2012). ACTFL Proficiency Guidelines: American Council on the Teaching of Foreign Languages. Retrieved from http://actflproficiencyguidelines2012.org/.

Arnold, N. (2007). Reducing foreign language communication apprehension with computer-mediated communication: A preliminary study. *System, 35*, 469-486.

Austin, J. L. (1962/2006). How to do things with words. In A. Jaworski & N. Coupland (Eds.), *The Discourse Reader* (Second ed., pp. 55-65). New York: Routledge.

Bakhtin, M. M. (1986). The problem of speech genres. In C. Emerson & M. Holmquist (Eds.), *Speech genres and other late essays.* (pp. 60-102). Austin: University of Texas Press.

Bargh, J. A., McKenna, K. Y. A., & Fitzsimons, G. M. (2002). Can you see the real me? Activation and expression of the "true self" on the internet. *Journal of Social Issues, 58*, 33-48.

Barnett, S. M., & Ceci, S. J. (2002). When and where do we apply what we learn? A taxonomy for far transfer. *Psychological Bulletin, 128*(4), 612-637.

Baron, N. S. (2000). *Alphabet to Email: How written English evolved and where it's heading*. London: Routledge.

Baron, N. S. (2008). *Always On: Language in an Online and Mobile World*. New York: Oxford University Press.

Bateson, G. (1972). *Steps to an Ecology of Mind*. New York: Ballantine.

Baym, N. K. (1995). The Emergence of Community in Computer-Mediated Communication. In S. Jones (Ed.), *CyberSociety* (pp. 138-163). Thousand Oaks, CA: Sage.

Baym, N. K. (2000). *Tune in, Log on: Soaps, Fandom, and Online Community*. Thousand Oaks, CA: Sage.

Baym, N. K. (2006). Finding the Quality in Qualitative Research. In D. Silver & A. Massanari (Eds.), *Critical Cyberculture Studies* (pp. 79-87). New York: New York University Press.

Baym, N. K. (2010). *Personal connections in the digital age*. Cambridge: Polity Press.

Beach, K. (1999). Consequential transitions: A sociocultural expedition beyond transfer in education. *Review of Research in Education, 24*, 61–100.

Beauvois, M. H. (1992). Computer-assisted discussion in the foreign language classroom: Conversation in slow motion. *Foreign Language Annals, 25*, 455-464.

Beauvois, M. H. (1997a). High-tech, high-touch: From discussion to composition in the net-worked classroom. *Computer Assisted Language Learning, 10*, 57-69.

Beauvois, M. H. (1997b). Write to speak: The effects of electronic communication on the oral achievement of fourth semester French students. In J. Muyskens (Ed.), *New ways of learning and teaching: Focus on technology and foreign language education* (pp. 93-115). Boston: Heinle & Heinle Publishers.

Beauvois, M. H. (1998a). Conversations in Slow Motion: Computer-mediated Communication in the Foreign Language Classroom. *Canadian Modern Language Review, 54*(2), 198-217.

Beauvois, M. H. (1998b). E-Talk: Computer-Assisted Classroom Discussion—Attitudes and Motivation. In J. Swaffar, S. Romano, K. Arens & P. Markley (Eds.), *Language Learning Online: Theory and Practice in the ESL and L2 Computer Classroom* (pp. 99-120). Austin, TX: Labyrinth Publications.

Beavis, C. (2008). Critical Review: L2 Literacy and the Design of Self: A Case Study of a Teenage Writing on the Internet. In J. Coiro, M. Knobel, C. Lankshear & D. J. Leu (Eds.), *Handbook of research on new literacies* (pp. 1215-1227). New York: Lawrence Erlbaum Associates, Taylor & Francis Group.

Bereiter, C. (1995). A dispositional view of transfer. In A. McKeough, J. Lupart & A. Marini (Eds.), *Teaching for transfer: Fostering generalization in learning* (pp. 21-34). Mahwah NJ: Lawrence Erlbaum Associates.

Biber, D. (1986). Spoken and written textual dimensions in English: Resolving the contradictory findings. *Language, 62(2)*, 384-414.

Blake, C. (2009). Potential of text-based internet chats for improving oral fluency in a second language. *The Modern Language Journal, 93*(2), 227-240.

Blake, R. (2000). Computer Mediated Communication: A window on L2 Spanish interlanguage. *Language Learning and Technology, 4*(1), 120-136.

Blommaert, J. (2005). *Discourse*. Cambridge: Cambridge University Press.

Bogdan, R. C., & Biklen, S. K. (2007). *Qualitative Research for Education: An introduction to theories and methods* (5th ed.). Boston: Pearson.

Bourdieu, P. (1977). Structures and the habitus *Outline of a theory of practice* (pp. 72-95). Cambridge: Cambridge University Press.

boyd, d. (2007). Why Youth (Heart) Social Network Sites: The Role of Networked Publics in Teenage Social Life. In D. Buckingham (Ed.), *Youth, Identity, and Digital Media* (pp. 119-142). Cambridge, MA: MIT Press.

Brandt, D., & Clinton, K. (2002). Limits of the local: Expanding perspectives on literacy as a social practice. *Journal of Literacy Research, 34*(3), 337-356.

Bransford, J. D., Brown, A. L., & Cocking, R. R. (2000). *How people learn: Brain, mind, experience, and school*. Washington DC: National Academy Press.

Bransford, J. D., & Schwartz, D. L. (1999). Rethinking Transfer: A Simple Proposal with Multiple Implications. *Review of Research in Education, 24*, 61-100.

Bretz, M. L., Dvorak, T., Kirschner, C., & Kihyet, C. (2009). *Pasajes Literatura* (7th ed.). New York: McGraw-Hill.

Broner, M. A., & Tarone, E. E. (2001). Is it fun? Language play in a fifth-grade spanish immersion classroom. *The Modern Language Journal, 85*(3), 363-379.

Bronfenbrenner, U. (1976). The experimental ecology of education. *Educational Researcher, 5*(9), 5-15.

Bronfenbrenner, U. (1979). *The Ecology of Human Development: Experiments by Nature and Design* Cambridge: Harvard University Press.

Brown, G. (1996). Language learning, competence and performance. In G. Brown, K. Malmkjær & J. Williams (Eds.), *Performance and competence in second language acquisition* (pp. 187-203). Cambridge: Cambridge University Press.

Butler, J. (1997). *Excitable Speech: A Politics of the Performative*. New York / London: Routledge.

Caldwell, W. (2007). Taking Spanish Outside the Box: A Model for Integrating Service Learning Into Foreign Language Study. *Foreign Language Annals, 40*(3), 463-471.

Cameron, D. (1997). Performing gender identity: young men's talk and the construction of heterosexual identity. In S. Johnson & U. Meinhof (Eds.), *Language and Masculinity*. Oxford: Blackwell.

Catrambone, R., & Holyoak, K. J. (1989). Overcoming contextual limitations on problem-solving transfer. *Journal of Experimental Pyschology: Learning, Memory, and Cognition, 15*(6), 1147-1156.

Chapelle, C. A. (2005). Interactionist SLA theory in CALL Research. In G. Petrie (Ed.), *Research perspectives on CALL* (pp. 53-64). Mahwah, NJ: Laurence Erlbaum Associates.

Chatfield, T. (2013). OMG - it's the textual revolution. *New Scientist, 216*(2911), 40-40.

Cherny, L. (1999). *Conversation and community: Chat in a virtual world*. Stanford, CA: CSLI Publications.

Chi, M. T. H. (1997). Quantifying qualitative analyses of verbal data: A practical guide. *The Journal of the Learning Sciences, 6*(3), 271-315.

Chomsky, N. (1965). *Aspects of the Theory of Syntax*. Cambridge: MIT Press.

Chun, D. M. (1994). Using computer networking to facilitate the acquisition of interactive competence. *System, 22*(1), 17-31.

Chun, D. M. (2008). Computer-mediated discourse in instructed environments. In S. S. Magnan (Ed.), *Mediating Discourse Online* (pp. 15-45). Philadelphia: John Benjamins.

Collentine, J. (2010). The Acquisition and Teaching of the Spanish Subjunctive: An Update on Current Findings. *Hispania, 93*(1), 39-51.

Collentine, K. (2009). Learner use of holistic language units in multimodal, task-based synchronous computer-mediated communication. *Language Learning and Technology, 13*(2), 68-87.

Compton, L. (2002). *From chatting to confidence: A case study of the impact of online chatting on international teaching assistants' willingness to communicate, confidence level and fluency in oral communication.* (Master's Master's thesis), Iowa State University.

Compton, L. (2004). Using text chat to improve willingness to communicate. In J.-B. Son (Ed.), *Computer-Assisted Language Learning: Concepts, Contexts and Practices* (pp. 123-144). New York: iUniverse.

Coniam, D., & Wong, R. (2004). Internet Relay Chat as a tool in the autonomous development of ESL learners' English language ability: an exploratory study. *System, 32*, 321–335.

Cope, B., & Kalantzis, M. (Eds.). (1993). *The powers of literacy: A genre approach to teaching writing*. Pittsburgh: University of Pittsburgh Press.

Coupland, N. (2007). *Style*. Cambridge: Cambridge University Press.

Crystal, D. (2006). *Language and the Internet* (Second ed.). Cambridge: Cambridge University Press.

Crystal, D. (2008). *Txtng: The gr8 db8*. New York: Oxford University Press.

Danet, B. (2001). *Cyberpl@y: Communicating online*. Oxford: Berg.

Danet, B., & Herring, S. C. (2007). *The Multilingual Internet: Language, Culture, and Communication Online*. Oxford: Oxford University Press.

Darhower, M. A. (2002). Interactional features of synchronous computer-mediated communication in the intermediate L2 class: A sociocultural case study. *CALICO Journal, 19*(2), 249-277.

Darhower, M. A. (2007). A Tale of Two Communities: Group Dynamics and Community Building in a Spanish - English Telecollaboration. *CALICO Journal, 24*(3), 561-590.

Design-Based Research Collective. (2003). Design-based research: An emerging paradigm for educational inquiry. *Educational Researcher, 32*(1), 5-9.

Donath, J. (1998). Identity and deception in the virtual community. In P. Kollock & M. Smith (Eds.), *Communities in Cyberspace*. London: Routledge.

Donato, R. (1994). Collective Scaffolding in Second Language Learning. In J. P. Lantolf & G. Appel (Eds.), *Vygotskian Approaches to Second Language Research* (pp. 33-56). Norwood, New Jersey: Ablex Publishing Corporation.

Donato, R. (2000). Sociocultural contributions to understanding the foreign and second language classroom. In J. P. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp. 27-50). Oxford: Oxford University Press.

Donato, R., & Brooks, F. B. (2004). Literary discussions and advanced speaking functions: Researching the (dis)connection. *Foreign Language Annals, 37*(2), 183–199.

Durán, R. P. (2008). A Commentary on "L2 Literacy and the Design of Self": Electronic Representation and Social Networking. In J. Coiro, M. Knobel, C. Lankshear & D. J. Leu (Eds.), *Handbook of research on new literacies* (pp. 1229-1240). New York: Lawrence Erlbaum Associates, Taylor & Francis Group.

Dyson, A. H. (1999). Transforming transfer: Unruly children, contrary texts, and the persistence of the pedagogical order. In A. Iran-Nejad & P. D. Pearson (Eds.), *Review of Research in Education* (Vol. 24, pp. 141-171): American Educational Research Association.

Ebacher, C. (2013). Taking Spanish into the Community: A Novice's Guide to Service-Learning. *Hispania, 96*(2), 397-408.

Egan, K. (1999). Speaking: A critical skill and challenge. *CALICO Journal, 16*, 277-294.

Ellis, R. (1985). A variable competence model of second language acquisition. *IRAL, 23*, 47-59.

Ellis, R. (2003). *Task-based language learning and teaching*. Oxford: Oxford University Press.

Ellison, N., Heino, R., & Gibbs, J. (2006). Managing Impressions Online: Self-Presentation Processes in the Online Dating Environment. *Journal of Computer-Mediated Communication, 11*(2).

Emerson, R. M., Fretz, R. I., & Shaw, L. L. (1995). *Writing Ethnographic Fieldnotes*. Chicago: University of Chicago Press.

Engle, R. A. (2006). Framing interactions to foster generative learning: A situative explanation of transfer in a community of learners classroom. *The Journal of the Learning Sciences, 15*(4), 451-498.

Engle, R. A. (2012). The Resurgence of Research Into Transfer: An Introduction to the Final Articles of the Transfer Strand. *The Journal of the Learning Sciences, 21*, 347–352.

Engle, R. A., Lam, D. P., Meyer, X. S., & Nix, S. E. (2012). How does expansive framing promote transfer? Several proposed explanations and a research agenda for investigating them. . *Educational Psychologist., 47*, 215-231.

Engle, R. A., Nguyen, P. D., & Mendelson, A. (2011). The influence of framing on transfer: Initial evidence from a tutoring experiment. *instructional Science, 39*(5), 603-628.

Fairclough, N. (2001). *Language and Power* (2nd ed.). Harlow, England: Pearson Education.

Finnegan, R. (1988). *Literacy and orality: Studies in the technology of communication*. Oxford, UK: Blackwell.

Fiori, M. (2005). The development of grammatical competence through synchronous computer-mediated communication. CALICO Journal 2, 3, 567–602 . *CALICO Journal, 22*(3), 567-602.

Floriani, A. (1994). Negotiating what counts: Roles and relationships, texts and contexts, content and meaning. *Linguistics & Education, 5*, 241-274.

Freiermuth, M., & Jarrell, D. (2006). Willingness to communicate: can online chat help? *International Journal of Applied Linguistics, 16*(2), 189-212.

Fung, A. (2006). Bridging Cyberlife and Real Life: A Study of Online Communities in Hong Kong. In D. Silver & A. Massanari (Eds.), *Critical Cyberculture Studies* (pp. 129-139). New York: New York University Press.

Gándara, P., & Orfield, G. (2010). A return to the "Mexican Room": The segregation of Arizona's English Learners. : The Civil Rights Project/Proyecto Derechos Civiles.

Gass, S. M., & Mackey, A. (2000). *Stimulated recall methodology in second language research*. Mahwah, NJ: Lawrence Erlbaum.

Gass, S. M., & Madden, C. (Eds.). (1985). *Input in second language acquisition*. Rowley, MA: Newbury House.

Gass, S. M., & Varonis, E. M. (1985). Task variation and nonnative/nonnative negotiation of meaning. In S.Gass & C.Madden (Eds.), *Input in second language acquisition* (pp. 149-161). Rowley, MA: Newbury House.

Gee, J. P. (1996). *Social linguistics and literacies* (2nd ed.). London: Taylor & Francis.

Gee, J. P. (2003). *What Video Games Have to Teach Us About Learning and Literacy*. New York: Palgrave MacMillan.

Gee, J. P., & Green, J. L. (1998). Discourse analysis, learning, and social practice: A methodological study. *Review of Research in Education, 23*, 119–165.

Gentner, D., & Gentner, D. R. (1983). Flowing Water or Teeming Crowds: Mental Models of Electricity. In D. Genter & A. Stevens (Eds.), *Mental Models*. Hillsdale, New Jersey: Erlbaum.

Gibbs, J. L., Ellison, N. B., & Heino, R. D. (2006). Self-Presentation in Online Personals: The Role of Anticipated Future Interaction, Self-Disclosure, and Perceived Success in Internet Dating. *Communication Research, 33*(2).

Gibson, J. J. (1986). *The ecological approach to visual perception*. New York: Psychology Press.

Gick, M. L., & Holyoak, K. J. (1980). Analogical problem solving. *Cognitive Psychology, 12*, 306-355.

Gick, M. L., & Holyoak, K. J. (1983). Schema Induction and Analogical Transfer. *Cognitive Psychology, 15*(1), 1-38.

Goffman, E. (1959). *The Presentation of Self in Everyday Life*. New York: Doubleday.

Goffman, E. (1974). *Frame analysis: An essay on the organization of experience*. New York: Harper & Row.

Goffman, E. (1981). Footing *Forms of Talk* (pp. 124-159). Cambridge: Harvard University Press.

González-Lloret, M. (2008). Computer-mediated learning of L2 pragmatics. In E. A. Soler & A. Martínez-Flor (Eds.), *Investigating Pragmatics In Foreign Language Learning, Teaching and Testing* (pp. 114-132). Clevedon, UK: Multilingual Matters.

Greeno, J. G., Smith, D. R., & Moore, J. L. (1993). Transfer of situated learning. In D. K. Detterman & R. J. Sternberg (Eds.), *Transfer on trial: Intelligence, cognition, and instruction* (pp. 99–127). Norwood, NJ: Ablex.

Hammer, D., Elby, A., Scherr, R. E., & Redish, E. F. (2005). Resources, framing, and transfer. In J. Mestre (Ed.), *Transfer of learning: Research and perspectives* (pp. 89-119). Greenwich, CT: Information Age Publishing.

Hand, V. M., & Mendelson, A. (2011). Introduction. In V. M. Hand (Ed.), *Theoretical and Empirical Accounts of Framing in Classroom Interactions.* Symposium presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA.

Haythornthwaite, C. (2005). Social networks and Internet connectivity effects. *Information, Communication, & Society, 8*(2), 125-147.

Haythornthwaite, C., & Wellman, B. (2002). The Internet in Everyday Life: An Introduction. In B. Wellman & C. Haythornthwaite (Eds.), *The Internet in Everyday Life*. Oxford: Blackwell Publishers.

Hellebrandt, J., & Varona, L. T. (1999). *Construyendo Puentes (building bridges): Concepts and Models for Service Learning in Spanish*. Washington: AAHE.

Herring, S. C. (2004). Computer-Mediated Discourse Analysis: An Approach to Researching Online Behavior. In S. A. Barab, R. Kling & J. H. Gray (Eds.), *Designing for Virtual Communities in the Service of Learning*. (pp. 338-376). New York: Cambridge University Press.

Hirotani, M. (2009). Synchronous versus asynchronous CMC and transfer to Japanese oral performance. *CALICO Journal, 26*(2), 413-438.

Hoecherl-Alden, G. (2006). Connecting language to content: Second language literature instruction at the intermediate level. *Foreign Language Annals, 39*(2), 244-254.

Horwitz, E. K., Horwitz, M. B., & Cope, J. (1986). Foreign language classroom anxiety. *Modern Language Journal, 70*(2), 125–132.

Hudson, J. M., & Bruckman, A. (2002). IRC Francais: The Creation of an Internet-Based SLA Community. *Computer Assisted Language Learning, 15*(2), 109-134.

Ivanic, R. (1998). *Writing and Identity: The discoursal construction of identity in academic writing*. Philadelphia: John Benjamins.

James, M. A. (2008). The influence of perceptions of task similarity/difference on learning transfer in second language writing. *Written Communication, 25*(1), 76-103.

James, M. A. (2014). Learning transfer in English-for-academic-purposes contexts: A systematic review of research. *Journal of English for Academic Purposes, 14*, 1-13.

Jaworski, A., & Coupland, N. (Eds.). (2006). *The Discourse Reader* (Second ed.). New York: Routledge.

Judd, C. H. (1908). The relation of special training and general intelligence. *Educational Review, 36*, 28-42.

Kasper, G. (2001). Four perspectives on L2 pragmatic development. *Applied Linguistics, 22*(4), 502-530.

Kern, R. (1995). Restructuring classroom interaction with networked computers: Effects on quality and characteristics of language production. *Modern Language Journal, 79(4)*, 457-476.

Kern, R. (2000). *Literacy and Language Teaching*. Oxford: Oxford University.

Kern, R. (2006). Perspectives on Technology in Learning and Teaching Languages. *TESOL Quarterly, 40*(1), 183-210.

Kern, R., & Warschauer, M. (2000). Theory and practice of network-based language teaching. In M. Warschauer & R. Kern (Eds.), *Network-based language teaching: Concepts and practice* (pp. 1-19). New York: Cambridge University Press.

Kim, M. (2004). Literature discussions in adult L2 learning. *Language and Education, 18*(2), 145–166.

Kinginger, C. (2004). Alice doesn't live here anymore: Foreign language learning and identity reconstruction. In A.Pavlenko & A.Blackledge (Eds.), *Negotiation of identities in multilingual contexts* (pp. 219-242). Clevedon, UK: Multilingual matters

Kinsella, N. (2010). Btw its just netspeak lol. *Griffith Working Papers in Pragmatics and Intercultural Communication, 3*(2), 64-74.

Kost, C. (2004). *An investigation of the effects of synchronous computer-mediated communication (CMC) on interlanguage development in beginning learners of German: Accuracy, proficiency, and communication strategies.* (Doctoral Dissertation), University of Arizona.

Kramsch, C. (2002a). Introduction, "How can we tell the dancer from the dance?". In C. Kramsch (Ed.), *Language acquisition and language socialization: Ecological perspectives* (pp. 1-30). London: Continuum.

Kramsch, C. (Ed.). (2002b). *Language acquisition and language socialization: Ecological perspectives*. London: Continuum.

Kramsch, C., & Steffensen, S. V. (2008). Ecological perspectives on second language acquisition and socialization. In P. A. Duff & N. H. Hornberger (Eds.), *Encyclopedia of Language and Education* (2nd ed., Vol. 8: Language Socialization, pp. 17-28).

Kramsch, C., & Thorne, S. (2002). Foreign Language Learning as Global Communicative Practice. In D. Block & D. Cameron (Eds.), *Globalization and Language Teaching* (pp. 83-100). London: Routledge.

Krashen, S. D. (1982). Second Language Acquisition Theory *Principles and practice in second language acquisition* (pp. 9-56): Pergamon Press.

Laboratory of Comparative Human Cognition. (1983). Culture and cognitive development. In P. H.Mussen (Ed.), *Handbook of child psychology: Vol. 1. History, theory and methods* (pp. 295–356). New York: Wiley.

Lam, W. S. E. (2000). L2 Literacy and the Design of the Self: A Case Study of a Teenager Writing on the Internet. *TESOL Quarterly, 34*(3), 457-482.

Lam, W. S. E. (2004). Second language socialization in a bilingual chat room: Global and local considerations. *Language Learning & Technology, 8*(3), 44-65.

Lamy, M.-N., & Hampel, R. (2007). *Online Communication in Language Learning and Teaching*. New York: Palgrave Macmillon.

Lantolf, J. P. (1997). The function of language play in the acquisition of L2 Spanish. In A. Pérez-Leroux & W. R. Glass (Eds.), *Contemporary perspectives on the acquisition of Spanish* (pp. 3-24). Somerville, MA: Cascadilla Press.

Lantolf, J. P. (Ed.). (2000). *Sociocultural theory and second language learning*. Oxford: Oxford University Press.

Lantolf, J. P., & Appel, G. (Eds.). (1994). *Vygotskian Approaches to Second Language Research*. Norwood, New Jersey: Ablex Publishing Corporation.

Lantolf, J. P., & Thorne, S. L. (2006). *Sociocultural theory and the Genesis of Second Language Development*. Oxford: Oxford Univeristy Press.

Larsen-Freeman, D. (1997). Chaos/complexity science and second language acquisition. *Applied Linguistics, 18*(2), 141-165.

Larsen-Freeman, D. (2013). Transfer of learning transformed. *Language Learning, 63*(1), 107-129.

Lave, J. (1988). *Cognition in practice: Mind, mathematics and culture in everyday life*. Cambridge: Cambridge University Press.

Lave, J., & Wenger, E. (1991). *Situated Learning: Legitimate Peripheral Participation*. New York: Cambridge University Press.

Leander, K. M. (2001). "This is our freedom bus going home right now": Producing and hybridizing space-time contexts in pedagogical discourse. *Journal of Literacy Research, 33*(4), 637-679.

Leander, K. M. (2008). Toward a connective ethnography of online/offline literacy networks. In J. Coiro, M. Knobel, C. Lankshear & D. J. Leu (Eds.), *Handbook of research on new literacies* (pp. 33-65). New York: Lawrence Erlbaum Associates, Taylor & Francis Group.

Leander, K. M., & Lewis, C. (2008). Literacy and Internet Technologies. In B. V. Street & N. H. Hornberger (Eds.), *Encyclopedia of Language and Education* (2nd ed., Vol. 2: Literacy, pp. 53-70). Heidelberg: Springer.

Lemke, J. L. (1997). Cognition, context, and learning: A social semiotic perspective. In D. Kirshner & J. A. Whitson (Eds.), *Situated cognition: Social, semiotic and psychological perspectives* (pp. 37-57). Mahwah, NJ: Lawrence Erlbaum Associated.

Lemke, J. L. (2002). Language development and identity: multiple timescales in the ecology of learning. In C. Kramsch (Ed.), *Language acquisition and language socialization. Ecological perspectives* (pp. 68-87). London: Continuum.

Levelt, W. J. M. (1989). *Speaking: From intention to articulation*. Cambridge, MA: The MIT Press.

Lightbown, P. M., & Spada, N. (2006). *How languages are learned*. Oxford: Oxford University Press.

Lin, W.-C., Huang, H.-T., & Liou, H.-C. (2013). The Effects of Text-Based SCMC on SLA: A Meta Analysis. *Language Learning and Technology, 17*(2), 123–142.

Lobato, J. (2012). The actor-oriented transfer perspective and its contributions to educational research and practice. *Educational Psychologist., 47*(3), 232-247.

Long, M. (1985). Input and second language acquisition theory. In S.Gass & C.Madden (Eds.), *Input in second language acquisition* (pp. 377-393). Rowley, MA: Newbury House.

MacIntyre, P. D., Clément, R., Dörnyei, Z., & Noels, K. A. (1998). Conceptualizing willingness to communicate in a L2: A situational model of L2 confidence and affiliation. *The Modern Language Journal, 82*(4), 545-562

MacIntyre, P. D., & Gardner, R. C. (1991). Investigating language class anxiety using the focused essay technique. *Modern Language Journal, 75*, 296-304.

MacIntyre, P. D., Noels, K. A., & Clément, R. (1997). Biases in Self-Ratings of Second Language Proficiency: The Role of Language Anxiety. *Language Learning, 47*(2), 265–287.

Mantero, M. (2002). Bridging the gap: Discourse in text-based foreign language classrooms. *Foreign Language Annals, 35*(4), 437–456.

McKenna, K. Y. A., Green, A. S., & Gleason, M. E. J. (2002). Relationship Formation on the Internet: What's the Big Attraction? *Journal of Social Sciences, 58*(1), 9-31.

McLaughlin, B. (1990). Restructuring. *Applied Linguistics, 11*, 113-128.

Mehan, H. (1979). "What Time Is It, Denise?": Asking Known Information Questions in Classroom Discourse. *Theory into Practice, 18*(4), 285-294.

Mehr, H. S., Zoghi, M., & Assadi, N. (2013). Effects of Synchronous Computer-Mediated Communication and Face-to-Face Interaction on Speaking Skill Development of Iranian

EFL Learners. *International Journal of Applied Linguistics & English Literature, 2*(5), 36-41.

Mendelson, A. (2009). Online Communication in Beginning Spanish Instruction. *Berkeley Language Center Newsletter, 25*(1), 8-14.

Mendelson, A. (2010). Using online forums to scaffold oral participation in foreign language instruction. *L2 Journal, 2*(1), 23-44.

Mendelson, A. (2012). Chatting in paragraphs: Towards academic discourse in foreign language chat. *Canadian Modern Language Review, 68*(4), 393-421.

Meskill, C., & Anthony, N. (2007). Form-focused Communicative Practice via CMC: What Language Learners Say. *CALICO Journal, 25*(1), 69-90.

Mitchell, W. J. (2003). Boundaries / networks *Me++. The cyborg self and the networked city.* (pp. 7-17).

MLA Ad Hoc Committee on Foreign Languages. (2007). Foreign languages and higher education: New structures for a changed world. *Profession, 12*, 234-245.

New London Group. (1996). A pedagogy of multiliteracies: Designing social futures. *Harvard Educational Review, 66*(1), 60-92.

Nokes, T. J. (2009). Mechanisms of knowledge transfer. *Thinking & Reasoning, 15*(1), 1-36.

Norton, B. (2000). *Identity and language learning: Gender, ethnicity and educational change*. Essex, England: Pearson Education.

Nunan, D. (1999). Speaking in a second language. *The Language Teacher, 23*(6), 27-29.

O'Connor, A. (2012). Beyond the four walls: community-based learning and languages. *The Language Learning Journal, 40*(3), 307-320.

O'Rourke, B. (2008). The other C in CMC: What alternative data sources can tell us about text-based synchronous computer mediated communication and language learning. *Computer Assisted Language Learning, 21*(3), 227-251.

Ochs, E. (1996). Linguistic resources for socializing humanity. In J. Gumperz & S. Levinson (Eds.), *Rethinking linguistic relativity* (pp. 407-438). Cambridge: Cambridge University Press.

Olsen, L. (1997). *Made in America: Immigrant students in our public schools*. New York: The New Press.

Ortega, L. (2009). Interaction and attention to form in L2 text-based computer-mediated communication. In A. Mackey & C. Polio (Eds.), *Multiple Perspectives on Interaction: Second Language Research in Honor of Susan M. Gass* (pp. 226-253). New York: Routledge.

Packer, M. (2001). The problem of transfer, and the sociocultural critique of schooling. *The Journal of the Learning Sciences, 10*, 493–514.

Palloff, R., & Pratt, K. (1999). *Building learning communities in cyberspace: Effective strategies for the online classroom*. San Francisco: Jossey-Bass Publishers.

Paran, A. (2008). The role of literature in instructed foreign language learning and teaching: An evidence-based survey. *Language Teaching, 41*(4), 465-496.

Parks, M., & Floyd, K. (1996). Making friends in cyberspace. *Journal of Communication, 46*(1).

Pavlenko, A., & Lantolf, J. P. (2000). Second language learning as participation and the (re)construction of selves. In J. P. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp. 155-177). Oxford: Oxford University Press.

Payne, J. S., & Ross, B. M. (2005). Synchronous CMC, working memory, and L2 oral proficiency development. *Language Learning and Technology, 9*(3), 35-54.

Payne, J. S., & Whitney, P. J. (2002). Developing L2 oral proficiency through synchronous CMC: Output, working memory, and interlanguage development. *CALICO Journal, 20*(1), 7-32.

Pea, R. D. (1987). Socializing the knowledge transfer problem. *International Journal of Educational Research, 11*, 639–663.

Pea, R. D. (2004). The social and technological dimensions of scaffolding and related theoretical concepts for learning, education, and human activity. *Journal of the Learning Sciences, 13*(3), 423-451.

Pellettieri, J. (2000). Negotiation in cyberspace: The role of chatting in the development of grammatical competence. In M. Warschauer & R. Kern (Eds.), *Network-based Language Teaching: Concepts and Practice* (pp. 59-86). Cambridge, England: Cambridge University Press.

Pellettieri, J. (2011). Measuring Language-related Outcomes of Community-based Learning in Intermediate Spanish Courses. *Hispania, 94*(2), 285-302.

Perkins, D. N., & Salomon, G. (2012). Knowledge to go: A motivational and dispositional view of transfer. *Educational Psychologist., 47*(3), 248-258.

Pica, T., Kanagy, R., & Falodun, J. (1993). Choosing and using communication tasks for second language instruction. In G. Crookes & S. Gass (Eds.), *Tasks and Language Learning: Integrating Theory and Practice* (Vol. 1, pp. 9-34). Clevedon, England: Multilingual Matters.

Pino James, N. (2013). Exploring the benefits of ACMC for speaking development. *The IALLT Journal, 43*(1), 25-63.

Potts, D. (2005). Pedagogy, Purpose, and the Second Language Learner in On-Line Communities. *The Canadian Modern Language Review, 62*(1), 137-160.

Rezai, A. A., & Zafari, N. (2010). The Impact of Synchronous Computer-Mediated Communication (S-CMC) on the Oral Proficiency of Iranian EFL Learners. *Iranian Journal of Applied Linguistics, 13*(2), 101-119.

Rheingold, H. (1993). *The virtual community: Homesteading on the electronic frontier*. Reading, MA: Addison-Wesley.

Rheingold, H. (1995). *The Virtual Community: Finding Connection in a Computerized World*. London: Minerva.

Roick, O., & Heuser, S. (2013). Location Based Social Networks – Definition, Current State of the Art and Research Agenda. *Transactions in GIS*.

Ross, B. H. (1984). Remindings and Their Effects in Learning a Cognitive Skill. *Cognitive Psychology, 16*(371-416).

Satar, H. M., & Özdener, N. (2008). The effects of synchronous CMC on speaking proficiency and anxiety: Text versus voice chat. *The Modern Language Journal, 92*(4), 595-613.

Sauro, S. (2011). SCMC for SLA: A research synthesis. *CALICO Journal, 28*(2), 369-391

Schiffrin, D. (2006). From linguistic reference to social reality. In A. d. Fina, D.Schiffrin & M.Bamberg (Eds.), *Discourse and Identity* (pp. 103-131).

Schmidt, R. (1990). The role of consciousness in second language learning. *Applied Linguistics, 11*, 129-157.

Schram, T. H. (2006). *Conceptualizing and Proposing Qualitative Research* (2nd ed.). Upper Saddle River, New Jersey: Pearson Education.

Schwartz, D. L., Bransford, J. D., & Sears, D. (2005). Efficiency and innovation in transfer. In J. Mestre (Ed.), *Transfer of learning: Research and perspectives* (pp. 1-51). Greenwich CT: Information Age Publishing.

Scribner, S., & Cole, M. (1978). Literacy without schooling: Testing for intellectual effects. *Harvard Educational Review, 48*(4), 448-461.

Scribner, S., & Cole, M. (1981). *The Psychology of Literacy*. Cambridge, MA: Harvard University Press.

Searle, J. (1972). What is a speech act? In P. P. Giglioli (Ed.), *Language and social context* (pp. 136–154). Harmondsworth, England: Penguin Books.

Selinker, L. (1972). Interlanguage. *International Review of Applied Linguistics, 10*, 209-231.

Sequeira, C. A. (2009). *Synchronous computer mediated communication and second language proficiency.* (doctoral dissertation), University of Oregon.

Sfard, A. (1988). On two metaphors for learning and the dangers of choosing just one. *Educational Researcher, 27*(2), 4-13.

Shamsudin, S., & Nesi, H. (2006). Computer-mediated communication in English for specific purposes: A case study with computer science students at Universiti Teknologi Malaysia. *Computer Assisted Language Learning, 19*, 317 – 339.

Shin, D. (2006). ESL students' computer-mediated communication practices: context configuration. *Language Learning & Technology, 10*(3), 65-84.

Skinner, B. F. (1957). *Verbal Behavior*. New York: Appleton-Century-Crofts.

Smith, B. (2003). Computer-mediated negotiated interaction: An expanded model. *The Modern Language Journal, 87*, 38-57.

Smith, B. (2008). Methodological hurdles in capturing CMC data: The case of the missing self-repair. *Language Learning and Technology, 12*(1), 85-103.

Smith, C. E. (2011). *Checking In: A Phemonological Study of Active Users of Geolocational Tagging Services.* Paper presented at the ASIST 2011, New Orleans, LA.

Sotillo, S. M. (2000). Discourse functions and syntactic complexity in synchronous and asynchronous communication. *Language Learning and Technology, 4*(1), 82-119.

Spencer, R. M., & Weisberg, R. W. (1986). Context-dependent effects on analogical transfer. *Memory & Cognition, 14*(5), 442-449.

Spiliotopoulos, V., & Carey, S. (2005). Investigating the Role of Identity in Writing Using Electronic Bulletin Boards. *The Canadian Modern Language Review, 62*(1), 87–109.

Swain, M. (1985). Communicative competence: Some roles of comprehensible output in its development. In S.Gass & C.Madden (Eds.), *Input in second language acquisition* (pp. 235-253). Rowley, MA: Newbury House.

Swain, M. (2000). The output hypothesis and beyond: Mediating acquisition through collaborative dialogue. In J. P. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp. 97-114). Oxford: Oxford University Press.

Sykes, J. M. (2005). Synchronous CMC and pragmatic development: Effects of oral and written chat. *CALICO Journal, 22*(3), 399-431.

Tannen, D. (1993a). What's in a frame? Surface evidence for underlying expectations. In D. Tannen (Ed.), *Framing in Discourse* (pp. 14-56). New York, NY: Oxford University Press.

Tannen, D. (Ed.). (1993b). *Framing in Discourse*. New York, NY: Oxford University Press.

Tannen, D., & Wallet, C. (1987/2006). Interactive frames and knowledge schemas in interaction: Examples from a medical examination/interview. In A. Jaworski & N. Coupland (Eds.), *The Discourse Reader* (Second ed., pp. 332-348). New York: Routledge.

Tarone, E. (1983). On the variability of interlanguage systems. *Applied Linguistics, 4*, 142-163.

Thompson, G., & Hunston, S. (2000). Evaluation: An introduction. In S. Hunston & G. Thompson (Eds.), *Evaluation in Text*.

Thorndike, E. L., & Woodworth, R. S. (1901). The influence of improvement in one mental function upon the efficiency of other functions. *Psychological Review, 8*, 247-261.

Thorne, S. (2003). Artifacts and cultures-of-use in intercultural communication. *Language Learning and Technology, 7*(2), 38-67.

Thorne, S., & Payne, J. S. (2005). Evolutionary Trajectories, Internetmediated Expression, and Language Education. *CALICO Journal, 22*(3), 371-397.

Tuomi-Grohn, T., & Engestrom, Y. (2003). Conceptualizing transfer: from standard notions to developmental notions. In T. Tuomi-Grohn & Y. Engestrom (Eds.), *Between work and school: new perspectives on transfer and boundary-crossing* (pp. 19-38). London: Pergamon.

Turkle, S. (1995). *Life on the screen: Identity in the age of the internet*. New York: Touchstone.

Turkle, S. (2011). *Alone together: Why we expect more from technology and less from each other*. New York: Basic Books.

Ushida, E. (2005). The Role of Students' Attitudes and Motivation in Second Language Learning in Online Language Courses. *CALICO Journal, 23*(1), 49-78.

Valdés, G. (2004). The teaching of academic language to minority second language learners. In A. Ball & S. W. Freedman (Eds.), *Bakhtinian perspectives on language, literacy, and learning* (pp. 66-98). Cambridge, UK: Cambridge University Press.

van Eemeren, F. H., & Grootendorst, R. (1983). *Speech Acts in Argumentative Discussions*. Dordrecht: Foris Publications.

van Lier, L. (2000). From input to affordance: Social-interactive learning from an ecological perspective. In J. P. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp. 245-260). Oxford: Oxford University Press.

Vandergriff, I., & Fuchs, C. (2009). Does CMC promote language play? Exploring humor in two modalities. *CALICO Journal, 27*(1), 26-47.

Varonis, E. M., & Gass, S. M. (1985). Non-native/Non-native Conversations: A Model for Negotiation of Meaning. *Applied Linguistics, 6*(1), 71-90.

Vygotsky, L. S. (1978). *Mind in Society*. Cambridge, MA: Harvard University Press.

Walther, J. B. (1992). Interpersonal Effects in Computer-Mediated Interaction: A Relational Perspective. *Communication Research, 19*(1), 52-90.

Walther, J. B. (1996). Computer-Mediated Communication: Impersonal, Interpersonal, and Hyperpersonal Interaction. *Communication Research, 23*(1), 3-43. doi: 10.1177/009365096023001001

Warner, C. N. (2004). It's just a game, right? Types of play in foreign language CMC. *Language Learning and Technology, 8*(2), 69-87.

Warschauer, M. (1996). Comparing face-to-face and electronic discussion in the second language classroom. *CALICO Journal, 13*(2), 7-26.

Warschauer, M. (2000). Online learning in second language classrooms: An ethnographic study. In M. Warschauer & R. Kern (Eds.), *Network-based language teaching Concepts and practice* (pp. 41-58). New York: Cambridge University Press.

Watson-Gegeo, K., & Nielsen, S. (2003). Language socialization in SLA. In C. Doughty & M. Long (Eds.), *The Handbook of SLA* (pp. 155-176).

Weedon, C. (1987). Principles of poststructuralism *Feminist practice and post-structuralist theory* (pp. 12-42). Cambridge: Blackwell.

Wenger, E. (1998). *Communities of practice: learning, meaning, and identity*. Cambridge: Cambridge University Press.

Whitty, M. (2007). Love letters: The development of romantic relationships throughout the ages. In A. Joinson, K. McKenna, T. Postmes & U.-D. Reips (Eds.), *The Oxford Handbook of Internet Psychology* (pp. 31-42). Oxford, England: Oxford University Press.

Wong Fillmore, L. (2009). English language development: Acquiring the language needed for literacy and learning. *Pearson Research into Practice*.

Wortham, S. (2006). *Learning identity*. New York: Cambridge University Press.

Yin, R. K. (2009). *Case study research: Design and methods*. Los Angeles: Sage.

Young, D. J. (1991). Creating a Low-Anxiety Classroom Environment: What Does Language Anxiety Research Suggest? *The Modern Language Journal, 75*(4), 426-439.

1	Adam:	a ustedes les gustan tus clases de espanol este semestre? *do you guys like your Spanish classes this semester?*
2	Xiao:	mas o menos pienso que debemos hablar mas *more or less, I think we should speak more*
3	Xiao:	(hola estoy aqui) *hi, I'm here*
4	David:	um... es un poco aburrido. No hacemos muchos actividades en grupos *um... it's a bit boring. We don't do many group activities*
5	Amanda:	si si! mi profesora es muy bien *yes yes! my profesor es very good*
6	Adam:	no se si recuerdan, pero el semestre pasado no empezabamos a hacer actividades en grupo hasta la segunda mitad del semestre *I don't know if you guys remember, but last semester we didn't start doing group activities until the second half of the semester*
7	Adam:	Amanda, cuales son las cosas que te gustan de tu clase? *Amanda, what are the things you like about your class?*
8	Adam:	Xiao, en tu clase haces proyectos en grupo, no? *Xiao, en your class you guys do group projects, right?*
9	Amanda:	la profesora es alegra y muy divertida *the professor is happy and fun*
10	Xiao:	si recientemente *yes, recently*
11	Amanda:	y casi dia hacemos actividades en grupos *and almost (every) day we do group activities*
12	Xiao:	nunca hay demasiado tiempo para hablar *there's never too/very much time to speak*
13	Adam:	entonces todo prefieren actividades en grupos? *so all of you guys prefer group activities?*
14	Xiao:	solamente en mi opinion *only my opinión*
15	Xiao:	si *yes*
16	Adam:	les explico algo... *let me explain something to you guys*
17	Amanda:	a veces, la profesora habla ingles para explicar mejor *sometimes, the professor speaks English to explain better*
18	Adam:	a muchos profesores de idioma no les gusta hacer actividades en grupo porque tiene miedo que los alumnos hablen ingles *many language instructors don't like to do group activities because they are afraid that the students will speak English*
19	Xiao:	pues... es verdad pero creo que con paciencia (patience) los estudiantes van a hablar en espanol *well... that's true but I think with patience *(patience)* students will speak Spanish*
20	Amanda:	encontro los estudientes interesantes en grupos *I think the students are interesting in groups*
21	Xiao:	si no son confidantes, no van a hablar inmedianmente en espanol *if they aren't confident, they're not going to speak in Spanish immediately*
22	Xiao:	*shrug*

23	Xiao:	no se *I don't know*
24	Xiao:	jaja si Amanda es verdad *haha yes Amanda that's true*
25	Xiao:	me gusta mucho hablar en grupo con Anthony *I like speaking to Anthony in groups very much*
26	Adam:	amanda, en tu clase, durante las activitidades en grupos, hablan en espanol o ingles? *amanda, in your class, during group activities, do you guys speak in Spanish of English?*
27	Amanda:	es divertido a practicar espanol con los otros estudiantes en grupos *it's fun to practice Spanish with the other students in groups*

Appendix 5.1
Summary of chat-based activities from fall 2009

Date of session	Description
4-Sep	Topic: Weekend plans and daily routine. Linguistic/Functional focus: Future tense, reflexive verbs, making comparisons. Follow-up activity: Students recorded an individual audio file explaining their daily routine.
25-Sep	Topic: On-campus protest and walk-out. Linguistic/Functional focus: Narrate past events with imperfect and preterite tenses. Follow-up: Collaborative blog post.
14-Oct	Topic: Discussion of the children"s book *Pueblos del Mundo.* Linguistic/Functional focus: Expressing opinions in subordinate clauses with subjunctive and indicative mood. Follow-up: Oral discussion in the computer lab.
23-Oct	Topic: Concerns about campus life. Linguistic/Functional focus: Expressing opinions in subordinate clauses with subjunctive and indicative mood. Follow-up: Collaborative blog post.
6-Nov	Topic: Discussion of the short story *Espuma y nada más.* Linguistic/Functional focus: None specified. Follow-up: Oral discussion in the computer lab.
25-Nov*	Topic: Discussion of the short story *Imágenes Photoshop.* Linguistic/Functional focus: None specified. Follow-up: Oral discussion in the computer lab.

* Elizabeth absent

Pueblos del Mundo: ¿Qué opinas sobre este libro?

Tienes aproximadamente 20 minutos para chatear sobre este libro y compartir tus opiniones con tus compañeros. Considera las siguientes preguntas:
- ¿Cuáles son los aspectos positivos y negativos de este libro?
- ¿Cuál es el mensaje que el autor intenta dar a su audiencia?
- ¿Qué otros mensajes da indirectamente?

Utiliza ejemplos concretos del libro para apoyar tus opiniones.

Algunas estructuras para expresar opiniones

- Creo que / Pienso que / Me parece que + indicativo
- No creo que / No pienso que / No me parece que + subjuntivo
- Me gusta/preocupa/molesta/importa que + subjuntivo
- Es + adjetivo + que + subjuntivo/indicativo
    Ejemplos:
    o Es cierto/claro/verdad/obvio que + indicativo
    o Es posible/dudoso/bueno/horrible que + subjuntivo
- Me parece + adjetivo + que + subjuntivo/indicativo
    Ejemplos
    o Me parece cierto/claro que + indicativo
    o Me parece bien/mal/imposible/probable que + subjuntivo

Espuma y nada más: Chat y discusión oral

Ustedes tienen aproximadamente 20 minutos para chatear sobre lo siguiente:

---

3. Hagan un análisis detallada de la línea 122 del cuento:

   << Me habían dicho que Ud. me mataría. Vine para comprobarlo. >>

   Consideren lo siguiente:
   - Si el capitán Torres sabía que el barbero le quería matar, ¿por qué fue a la barbería?
   - ¿Por qué no mató el barbero al capitán? ¿Cuáles son las implicaciones de no haberle matado?

4. ¿Hay héroes y villanos en este cuento? ¿Quiénes son?

A las 11:30-11:35 empezaremos la discusión oral sobre estas mismas preguntas.