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Transformational processes and learner outcomes for online learning: An activity theory case study of Spanish students

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Transformational Processes and Learner Outcomes for Online Learning:

An Activity Theory Case Study of Spanish Students

By

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A dissertation submitted in partial fulfillment
of the requirements for the degree of
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tools

Dedication

As this dissertation represents the culmination of my life events to this point, I would like to dedicate it to my family who has been there for every step along the way. I dedicate it to my parents who instilled in me a great appreciation for the value of education. They also convinced me at a very early age that if I put my mind to it, I could do anything. As such, this dissertation is further evidence of their good parenting and never ending love and support.

I dedicate it to my wife, Denise, who motivated and inspired me in more ways than I can describe in words. When a wife truly loves and supports her husband as Denise has me, an accomplishment such as this seems to belong to both of us. Thus, although I put the words to paper to complete this dissertation, I feel as if my wife deserves a degree as well.

Last, I dedicate this dissertation to my two-year old daughter, Abigail, who is the reason for most things that I do in life. At countless times throughout the writing of this dissertation, she offered to help with "Daddy's work". If only I had paid attention to *writing on* the manuscript as much as she had, I may have completed the dissertation sooner.

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I would like to thank my colleagues in the College of Education and the Department of World Language Education. In particular, I would like to thank Maritza Chinea-Thornberry, who has been my supervisor and a dear friend. Much like my family she has been a source of constant support. In addition, I have formed many other friendships with faculty and fellow doctoral students. These bonds led to many conversations, both academic and personal, all of which helped to further my progress.

Last, I would like to thank my family members for their love and support. Their support came in many forms: checking on progress, offering the distraction of passing time together, and helping to fill the voids in life that are often left when attempting to complete a dissertation. Above all else, I want to thank my wife Denise for patiently bearing with me as I traveled along this serpentine path.

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ABSTRACT

The purpose of this exploratory study was to examine the actions of online

language learners from an activity theoretical perspective. It also attempted to explain

how the students' learning outcomes evolved from their online learning experiences. This

explanation placed an emphasis on the learners' previous experiences, defining their

activity systems, the use of mediational tools, and the resolution of contradictions. Within

this activity theoretical case study a background survey, four interviews, and three field

observations were conducted with seven foreign language students of an online Spanish

course. The students' on-screen actions were recorded and subsequently documented in a

video episode log. This log, the background survey, and the interview transcripts were

coded for the a priori categories established in the research questions and for emergent

themes.

Seven mediational tools were identified, including a widespread use of online

dictionaries and translators. The students attempted to use the mediational tools to gain

control over their online language learning; however, as exhibited by the students'

varying levels of regulation, some students were unable to reach or maintain self-

regulation while using computer-based tools. In addition, the nature of the mediational

tool use appeared to be influenced by the variety of linguistic backgrounds.

Three levels of contradictions were identified including: conflicting-object contradictions, inter-activity contradictions, and technology-related contradictions. The findings of this study indicated that contradictions may be invisible to the subject of the activity. Furthermore, it was noted in this research that some students may have the capacity to identify the contradiction, yet they may not have the desire or motivation required to make the necessary change to further learning and development within the activity. Thus, contradictions may not always be resolved even when they are visible.

Chapter One Purpose and Statement of the Problem

Introduction

Over the past few decades there has been an explosion in the amount of technologies created and used for language instruction, including various options for distance learning courses. Although much of past Computer-Assisted Language Learning (CALL) has consisted of drill and practice activities, which support classroom learning of vocabulary and grammatical structures, there is now wide scale use of Computer-Mediated Communication (CMC), course management systems such as WebCT and Blackboard, and other Internet-based technologies. For the most part, these technologies have been used as supplements to traditional classrooms; however, they have also modernized the field of distance learning in foreign language education as it has evolved from the early days of distance learning via mail correspondence, and radio and television broadcasts. This modernization has introduced a variety of distance education options, which utilize computer-based technologies and the Internet to offer blended learning courses and online learning courses.

As a result of these technological developments and the flexibility that they enable, colleges and universities have begun offering more distance learning language courses as an alternative to traditional face-to-face language courses. Reporting on data collected from the academic year 2000-2001, Allen and Seaman (2003) found that 81% of all institutions of higher education offer at least one online or blended learning course, and among public institutions 97% offer at least one online or blended course. This wide

scale use of distance education, and in particular online courses, directly reflects the 21st century pattern for information on demand. The Internet and computer-based technologies now allow people to access a plethora of information at anytime and from almost anywhere.

More specifically, online language courseware, such as EN LÍNEA developed by Vista Higher Learning and Quia, now allows students to participate in language courses completely online while using the Internet and computer-based technologies. This type of courseware is becoming increasingly more interactive, and it has begun to replace some of the traditional foreign language courses at the college level. As the number of these online language courses increases, it becomes essential that language researchers and instructors examine the learning processes that take place in these environments, as well as to investigate how these processes transform into learning outcomes for the students.

The general purpose of this case study research was to describe how the language learners reached their learning outcomes in an online learning environment, whether they were positive or negative. This included the course learning objectives and the students' desired outcomes, which the students identified for themselves. To accurately describe this transformational process that the students underwent in the online environment, four underlying foci were adopted. First, the study investigated the students' prior language learning and technological experiences to provide socio-historical context for their online language learning. Second, the researcher identified the learners' activity systems and tracked changes that occurred in these systems throughout the course. Third, the study identified the mediational tools used by the learners, instruments used to guide their

learning. Fourth, it identified any contradictions and disturbances that arose in online language learning and determined how and if they were resolved by the learners.

Theoretical Background

The foci implied by the study's overall purpose and specific research questions were guided chiefly by an activity theoretical (AT) background. Understanding online language learning from an AT perspective meant understanding the use of mediational tools within the activity of online learning. The tools available in online learning allowed the students the opportunity to exert control over their environment and ultimately transform it and themselves as individuals. In this manner the online tools mediated the human activity involved in online learning.

This idea of mediated human activity, and ultimately AT, is attributed largely to the foundational work of Lev Semyonovich Vygotsky's Sociocultural Theory. Specifically, Vygotsky introduced the idea of tools in mediated action, which lead to changes in objects (1978). Now, according to AT the structure of an activity system includes the subject, the object and related outcomes, mediational tools and artifacts, the community or communities, the division of labor, and rules (Engeström, 1993), thus making it a more complex system of analysis. As such, AT provides an analytical model for investigating human behaviors and psychological development by focusing on the object-oriented, tool- mediated activity as its unit of analysis. Activity is "any (activity) carried out by a subject includes goals, means, the process of molding the object, and the results. In fulfilling the activity, the subjects also change and develop themselves" (Davydov, 1999, p. 39). This transformation is aided by the mediational tools available in

the social environment of the learner. Engeström and Miettienen (1999) also describe "internal tensions" and "contradictions" as the motivating forces behind these changes and personal development (p. 8). This line of thinking anticipates and even values the problematic occurrences that likely accompany learning. A more in depth discussion of AT will be provided in chapter 2.

How the Study Originated

This dissertation research draws from my life's events and some of the resulting questions that I have asked myself along the way, including those just described about the problematic occurrences in online learning. Initially, I was driven to the field of foreign language education by a strong appreciation for languages and education, and their power to uplift people. This initial appreciation was then magnified with a growing fascination for instructional technology which has evolved with my pursuit of higher education. In 2002, after completing a B.A. in Spanish and Secondary Education, a M.A. in Spanish, and three years of teaching high school Spanish, I came to the University of South Florida to begin doctoral studies in Second Language Acquisition & Instructional Technology. At this time I began teaching college level Spanish courses in traditional, classroom settings, including Spanish I through Spanish IV. In the fall of 2004, I began working as the coordinator for the university's distance learning program for Spanish, the *Destinos* telecourse. This course was ultimately replaced by the online courseware EN LÍNEA in spring 2005. At the time of the study I will have taught the EN LÍNEA courses for the past six semesters.

Along this serpentine path of taking graduate level courses in Second Language Acquisition (SLA) and Computer-Assisted Language Learning (CALL) and teaching the online Spanish courses I found an increasing appreciation for the larger scope and potential of CALL. This overall interest led me to investigate CALL literature further. Meanwhile, in the online Spanish courses I began to notice particular student behaviors and resulting conflicts which they encountered as they progressed through the course. Frequently, I was asked to help in resolving these problems, both linguistic and technological in nature, but I also began to wonder how the students who did not contact me were going about resolving similar conflicts. This initial query became the foundation for this research project.

Rationale and Need for the Study

Building on my personal account of why this research is necessary, the general purpose of the study also draws from the larger context of academic research in online language learning. Within the socio-historical context of distance learning, online learning is now replacing many traditional and blended learning courses. While collecting data for the fall 2005 semester, Allen and Seaman (2006) found that nearly 3.2 million students in the United States took at least one online course, which was an increase from the 2.3 million reported in the previous fall semester. The current trend is for students to take many courses online in place of regular classes because they offer more flexible schedules. Through personal experience teaching online language courses, I would surmise that this trend appears to be coupled by the general perception, or misperception, that distance learning courses are somehow easier or less demanding than the traditional,

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classroom-based counterparts. From the institutional perspective, 57% of academic leaders indicated that they believe the "learning outcomes for online education are equal to or superior to those of face-to-face instruction" (Allen & Seaman, 2003, p. 3). Several years later, 62% rated learning outcomes in online education as the same or superior to face-to-face instruction (Allen & Seaman, 2006). The growing availability of online courses and these perceived differences in their outcomes makes it essential that researchers and educational professionals examine how students are participating, learning, and ultimately transforming in these courses.

Thus far, within the corpus of research conducted with online language learning the primary focus has been on the use of Computer-Mediated Communication (CMC). From this type of research, it is now generally accepted that there are many benefits of CALL (Chapelle, 2001; LeLoup & Ponterio, 2003; Liu, Moore, Graham, & Lee, 2003); however, little is known about the student learning processes associated with participating in an online language course. In addition, most investigations of online language learning have been conducted with blended learning courses or technology-enhanced courses, not complete online courses. This research is intended to investigate the language learning that takes place principally online through the use of an online courseware.

Past research associated specifically with complete online language learning has been scarce and the scope of such research has been limited, focusing primarily on the design of online learning activities (Du, 2002; Sawatpanit, Suthers, & Fleming, 2003; Strambi & Bouvet, 2003) and individual learner differences (Hobrom, 2004; Murday,

2004). Little research has been conducted which provides information about how language learners utilize and participate in online language courses. Furthermore, research has not addressed the individual learner's use of electronic tools, which are available in online courses. Unlike other research this study did not attempt to investigate a single tool. Rather, it investigated the learning processes of the students as a whole including their usage of the multiple tools available to them in the online learning environment. Investigating the use of these tools provided a clearer picture of how the students arrived at their outcomes through mediational means. This type of in depth investigation of online language learning had the potential to explain how the students participated in these courses and what was advantageous and disadvantageous to their learning. This research also distinguished between potential benefits and actual learning processes. Ultimately, by describing the actual process of resolving tensions in online language learning the results of this study may also be applied to increase student learning and create higher performance levels.

Last, this research also differs from the bulk of previous investigations of online learning because it investigated online learning processes as opposed to isolated outcomes. The use of AT as a theoretical framework promoted this focus by guiding the data collection and data analysis processes. AT has provided a conceptual framework for describing human activity with a focus on both individual and social levels, and it allowed for including computer-based technologies as a member of the activity system. Although the language learners may complete the same tasks, each student that participates in online language learning may also undergo a unique transformational

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process which is guided by socio-historical experiences and their use of mediational tools. Defining this process through AT allows for understanding their online language learning in full context.

In conclusion, this study has the potential to advance the development of online language learning in several ways. First and foremost, within the scope of investigating learner processes in online language learning, this study placed a large emphasis on the learners' social contexts and uses of mediational tools. Second, it offered a principled investigation into the relatively new phenomenon of online language learning, and it distinguished complete online language learning from other forms of blended learning formats. Last, it put forth a solid argument for an activity theoretical case study for the purpose of investigating online learning, which was ultimately deemed appropriate, practical, and efficient.

Purpose of the Study

The purpose of this study was to examine how the actions of online foreign language learners transform into learning and personal development through the use of available tools. First, the study attempted to identify and describe the nature of the students' previous experiences, their activity systems, the use of mediational tools, and the resolution of contradictions and disturbances that occurred in the online language learning environment. It also attempted to explain how the learning outcomes of the students' actions evolved from their activities involved in their online learning experiences, placing an emphasis on the learners' prior experiences, changes within their activity systems, use of mediational tools, contradictions, and disturbances. By defining

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the activity systems of the learners this study explains how individuals' past experiences influence online learning. In addition, the study explains what types of mediational tools were used by the learners and what types of conflicts these learners faced in the online language course.

The participants of this study were seven foreign language students of an online Spanish course at a large southeastern university. The research was conducted as an activity theoretical case study, which employed a background survey, interviews, observations, a researcher journal, and a review of supplementary course materials. These helped to provide insight to the learners' transformations involved in the processes related to their online language learning. The data was analyzed for emerging themes using the constant comparison method. Sociocultural Theory and Activity Theory were used to establish a theoretical framework for the research and to guide the data analysis.

Research Questions

Throughout this case study research the researcher paid special attention to the nature of the transformational process which the students underwent in the online language learning environment in order to reach their outcomes. With this overall focus and the activity theoretical framework in mind, four major questions with sub-questions were adopted for this study:

1. How do the language learners perceive their previous experiences with technology and language learning?
   a. What is the nature of the language learners' personal experiences with technology and language learning prior to taking the online Spanish course?

b. How do the students perceive the effects of their previous experiences on their current online language learning?

2. What is the nature of the online language learners' activity systems?

   a. What is the nature of the online language learners' activity systems at the beginning of the course?

   b. What changes, if any, occur in the learners' activity systems throughout the duration of the course?

3. What is the nature of the mediational tools used by the learners?

   a. What types of mediational tools are used by the online language learners?

   b. How are these mediational tools used to enable online learning?

4. What is the nature of the contradictions and disturbances that arise in online language learning?

   a. What types of contradictions and disturbances arise in online language learning?

   b. If possible, how are the learners able to resolve these contradictions as they occur?

Delimitations and Limitations of the Study

This study was conducted using an online Spanish I course at a large, southeastern university. The course is generally a large section with approximately 100-150 students, and it is the second of two consecutive courses, which many undergraduate students must take to fulfill the university foreign language requirement for graduation. The students participating in this research had to be enrolled in the online Spanish I course at the

university. The students were notified of the study after they began the course, and at this time the participants were selected for recruitment.

As the participants were selected in part according to ease of access, this reduced the generalizability of the findings. Because the study examined seven cases, the findings are not readily generalizable. Although the results of this research are not readily generalizable, they do provide a rich and valuable description of online learning for foreign language students. In addition, as several case study researchers note (Stake, 1995; Yin, 2003), generalizability is not the goal of case study research. This type of research has the potential to offer a new perspective of an uninvestigated field by providing thick descriptions, and it serves as a starting point for future research.

Much of the data was collected from the participants themselves through self-report. Although this offered the potential to gather rich information related to the cases being studied, it also provided an opportunity for unreliable information in which the students unknowingly or intentionally misrepresented themselves. For example, some participants may have offered what they deemed as socially desirable information in their responses. My plan to address this included taking caution in interpreting self-reported responses and confirming self-reported information through observation. The same can be said of researcher bias in the collection and the analysis of the data. It was important in this research to recognize that as the instructor of the course and the researcher I began the study with *a priori* beliefs related to online language learning and these beliefs were at the crux of the purpose behind this investigation. Having said this, it was also important to address this bias by thoroughly reviewing each stage of data collection and

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subsequent analysis, and to document any noteworthy occurrences in the researcher journal.

Definition of Terms

1. Action: An action is a specific behavior directed towards a goal. Actions are best understood in their full context, and they are subordinate to the larger activity.

2. Activity: An activity is a system of human behaviors aimed at obtaining a desired outcome. To accomplish this, the individual may use available tools to aid in the activity.

3. Activity Theory (AT): Activity Theory relates directly to the structure of an activity, mediation, interaction method, and internalization. It focuses on tools and objects in the development of human consciousness. The activity is considered to be doing something that is motivated by a biological or cultural need.

4. Appropriation: Appropriation is the process by which a person assimilates a new idea or object into his or her existing mental framework. This allows the person to have a conceptual understanding as well as the ability to operationalize the idea in future use.

5. Blended learning: Blended learning uses distance education and face-to-face instruction together. Many blended learning courses use online learning with face-to-face class meetings. This is also referred to as hybrid or web-enhanced learning and instruction.

6. Computer-assisted language learning (CALL): This is a type of learning and an approach to teaching languages, which utilizes computer-based technologies to deliver instruction, to provide arenas for the learners to rehearse their language learning, and to provide means of communication and interaction between the instructor and the learner

and the learner and other learners. Ultimately, CALL is the use of computer-based technologies to assist learners with their language learning. This is also referred to as technology-enhanced language learning (TELL).

7.   Computer-mediated communication (CMC): This is a means of communication by which two or more people, in the context of education the students and the learners or the learners and other learners, are able to communicate or "chat" with teach other using the assistance of a computer and often the Internet or local area network. This type of "chat" can occur synchronously or asynchronously. Examples of CMC include email, newsgroups, web pages, blogs, bulletin boards, etc. In CMC the two people are not able to see each other as they interact.

8.   Condition: This is a related contextual factor which affects an activity. When the conditions of an activity are foreign or unexpected, the individual then has to adapt.

9.   Contradictions: In Activity Theory contradictions are tensions that arise between elements of an activity system, between multiple activity systems, between different activities, or between phases of a single activity. These contradictions are viewed as problems, ruptures, breakdowns, or clashes. Contradictions are viewed as a source of development, and they are also referred to as disturbances, tensions, and conflicts. These terms will be used interchangeably hereon after.

10.   Course management system: A course management system is a computer-based system or tool that manages and organizes course materials via the Internet. These systems, often used online, allow the instructors and the students to gather and collect information, communicate synchronously and asynchronously, and keep track of course

progress. Blackboard and WebCT are examples of two widely used course management systems. For the sake of this research, course management systems have been differentiated from online courseware.

11.   Distance learning: Distance learning is an educational process that takes place with a separation of place and/or time between the instructor(s) and the learner(s). Varying types of interaction occur between the instructor and the learner, the learner and other learners, and the learner and the course materials. Distance learning courses of the past have utilized mail correspondence, radio broadcasting, video broadcasting, teleconferencing, etc. The current trend in distance learning is an increasing amount of computer-based technologies and the Internet used for online learning. The term distance education is also used to refer to the same field; however this term places more of an emphasis on the delivery of instruction.

12.   Disturbance: These are deviations from the normal flow of work. They can be tied to underlying contradictions of the activity systems. Often they are the visible manifestations of contradictions (Capper & Williams, 2004), which occur between people and their instruments or between two or more people.

13.   Goal: This is the object of an individual action. It is the desired result of an action.

14.   Internalization: Internalization is the process of learning something, an idea or a skill, from the social environment, and incorporating it within yourself and your existing mental framework and being able to use this new information in the future.

15.   Mediation: This is the idea that all human activity is affected or controlled by

artifacts which are used as tools in the activity. Mediation serves to assist the individual

in the completion of the proposed activity by enabling control over the world and the self.

16.   Mediational tools: These tools or artifacts are used by an individual to control

human activities. They can be physical (i.e. pencil or computer) or psychological (i.e.

language, or diagrams).

17.   Motive: This is the motivation for a specific action. Motive is what drives a

particular action in the activity. This is different from the object, which is the motivation

for the larger activity. It is an object that satisfies a need.

18.   Multimedia: Multimedia is a combination of several types of media in the same

document, program, software, web page, etc. which include the use of text, audio,

images, animation, video, and graphics.

19.   Object: This is the motivation for achieving a desired outcome for an activity. It

drives the activity.

20.   Online courseware: Online courseware is computer-based software used for

instruction in distance learning environments. For the sake of this research, online

courseware has been differentiated from course management systems. Also, the

courseware investigated in this research, EN LÍNEA, may be considered a stand alone

courseware offered via the Internet, meaning the students may participate in the course

completely at a distance.

21.   Online learning: This is learning that takes place in an Internet-based environment

using computer-based technologies for interaction, instruction, and communication.

Generally, in this type of learning there are no class meetings with the instructor. Online learning is also referred to as e-learning or online education.

22.   Operation: These are actions that have become automatic procedures. Operations are performed without conscious attention.

23.   Private speech: This is audible speech that an individual directs to himself to regulate his behaviors. It is not meant as a form of communication with others.

24.   Regulation: This is the idea that individuals or learners will attempt to control their learning through various means. The learner is said to be self-regulated if he is able to accomplish a task under his own guidance. He is said to be other-regulated if he depends on the assistance of another person. Last, he is said to be object-regulated if he depends on the use of an object or a tool.

25.   Scaffolding: Scaffolding is a form of support offered by teachers or more capable peers to another student for the purpose of helping the student learn the intended material (Wood, Bruner, & Ross, 1976). Several forms of scaffolding include: modeling, repetition, and feedback.

26.   Sociocultural theory (SCT): According to this theory of learning, development is viewed as originating in the social environment and through the use of tools and social interaction it is appropriated and internalized by the learner.

27.   Zone of proximal development: The zone of proximal development is the distance between what the learner can do alone and what he or she can do with assistance (Vygotsky, 1978, p. 86). This concept is used to describe the difference between what a child can achieve independently and what the child can achieve with assistance from

another person. Its focus is on the individual's potential level of development with the appropriate assistance.

Organization of Remaining Chapters

This study is organized in five chapters. Chapter 1briefly describes the state of foreign language distance learning as it is affected by the growth of computer-based technologies. It also presents an overview of the study including its rationale and purpose, which lead to the research questions. These research questions are answered using the data collected in the research process. The last section of chapter 1 contains operational definitions of terms, which are frequently used in the study.

Chapter 2 contains an overview of how the study originated empirically, including a clear distinction between evaluation and research in CALL contexts, a description of the evolution of distance learning and the major factors supporting its use, an overview of the current state of online language learning and online tools, and a perspective of CALL research which informs foreign language education. It also elaborates on Sociocultural Theory and Activity Theory research in the field of Second Language Acquisition to aid in establishing a theoretical framework for online language learning and to develop an empirical base for this research project.

Chapter 3 will contain an overview of an activity theoretical case study approach to qualitative research with the purpose of providing a systematic explanation of the study's details. This chapter describes the research procedures, including data collection and data analysis. It will also explain the role of Sociocultural Theory and Activity

Theory in establishing the theoretical framework for the study and their role in guiding the research questions and subsequent data analysis.

Chapter 4 describes the data collected in an effort to answer the study's research questions as described previously. This description begins by presenting a general outline of the data collected in the study. Then, the data will be used to formulate answers to the research questions posited in this study.

Chapter 5 discusses the findings for the research questions as presented in chapter four. This discussion provides theoretical, methodological, and practical implications in relation to Sociocultural Theory, Activity Theory, Second Language Acquisition, and Online Language Learning. Last, there will be a discussion of recommendations for future research.

Chapter Two CALL and Activity Theory: A Review of the Related Literature

Introduction

As has been described previously in more detail, the purpose of this multiple case study research was to investigate how language learners reached their outcomes in an online learning environment with a focus on the learners' previous experiences, defining their activity systems, mediational tools, and the resolution of contradictions which occur in the learning process. The following literature review attempts to describe the historical development and the current state of research findings, theoretical framework, and research methods that guided this research. In this manner, it addresses overall trends in what has been published about online language learning and identify any perceived gaps that exist. This literature review encompasses the fields of research most relevant to this study including that of: online learning and distance learning, computer-assisted language learning (CALL), Sociocultural Theory, and Activity Theory as it relates to Second Language Acquisition.

Defining Online Language Learning

The current state of online learning, based largely on computer-based and Internet technologies, represents the culmination of a field, distance education, which has evolved drastically over several centuries. The online learning tools, which are available presently, have transformed distance learning by affording learners an increased opportunity for instantaneous communication, interaction, and collaboration. In the following sections, I will define online learning as it relates to the scope of this research.

To do so I will place online learning in its socio-historical context and emphasize the key, overlapping characteristics of distance learning and online learning. Then, I continue with a discussion of the varying degrees of online learning to clarify what is meant by *online language learning* (OLL) hereafter. Last, I will offer a description and analysis of the online learning tools, which are currently available, and I will discuss how they have aided in transforming distance learning.

Placing OLL in Socio-historical Context

The purpose of this section is to place the scope of this research, online language learning, within the broader historical and educational context. This discussion begins with distance education, also referred to as distance learning. Keegan (1996) describes distance learning as containing five principal components: the separation of the learners and the instructor, the influence of an education organization, the use of media to unite the learners and the instructor, the capability for two-way communication, and the potential for meetings (p. 50). As will be discussed here, these basic principles have remained constant throughout the evolution of the field.

Distance learning, or distance education, can be traced back to England in the 1840s when Isaac Pitman began teaching shorthand. His pupils learned shorthand by copying Bible passages and submitting their work via the national mail system. The majority of the initial group of distance learning students were women who were unable to enroll at other gender-restricted schools, people with physical disabilities, people who had time conflicts related to their regular jobs, and people who lived too far from any potential school sites (Keegan, 1996). At the time the mail system was the only available

innovation which allowed the instructor and his or her students to interact at a distance. The mail system has served educational purposes quite well by affording the underserved and underprivileged populations of impoverished and isolated regions the opportunity to access education where there were no opportunities for education previously. Similarly, in more recent times, audiotapes and lessons sent through the mail have been used in correspondence courses to teach foreign languages (Criscito, 2002, p. 2).

During the 1920s radio was invented, and since then it has served as a valuable means of communication for distance learning. Unlike the early correspondence courses, radio provided the first means of delivering instruction synchronously, albeit one-way. Related specifically to language learning, the British Broadcasting Corporation began broadcasting modern language courses via radio as early as 1929 (Teaster & Blieszner, 1999). The advent of the television in the 1940s diminished the overall interest in radio, because television allowed distance learning courses to combine audio with video capabilities. Broadcasting educational programs via television has provided the opportunity to reach a larger amount of potential students while using a more dynamic means of instruction at a distance. For example, the educational *telenovela* Destinos, which was created in 1992 by a broadcasting company WGBH Boston and the Annenberg/CPB Project, is still widely used in the field of foreign language education to offer Spanish courses via distance education. At the university in which this case study will be conducted, Destinos was the predecessor distance language course offered before being replaced by the EN LÍNEA courseware.

During the 1950s and 1960s, teachers further adapted their use of television for distance learning when they began broadcasting live instruction to their students (Scatori, 1941). Since then live broadcasts and videotaped lectures have become a standard in university and professional courses (Cambre, 1991). Throughout the late 1980s and the 1990s, teleconferencing and videoconferencing technologies transformed distance learning to include more synchronous means of communication and direct instruction. This synchronous mode of delivery helped to eliminate the delay in student-teacher and student-student exchanges.

The 1980s was an important era in the evolution of distance education, because it marked the beginning of the rapid expansion in computer-based technologies. Examples of these technologies developed since the 1980s include: computer conferencing, Internet, World Wide Web, digital video discs, fiber optics, portals, simulations, virtual reality, video-conferencing, compact discs, electronic mail, LCD projectors, search engines, mobile phones, wireless networks, e-Portfolios, and expert systems (Bates, 2005, p. 43). These innovative technologies, especially multimedia, the Internet, and internet-based technologies, offer a variety of options for collaboration and interaction, and they have revolutionized what is now called online learning by allowing more flexibility without spatial and time restraints.

Now in the 21st Century, for universities and schools across the United States and many other countries, computer-based distance learning has become a more widely accepted alternative to face-to-face foreign language courses. The National Center for Education Statistics of the U.S. Department of Education conducted a study in spring of

2002 using academic institutions previously recruited for other studies. Questionnaires were mailed to 1600 institutions of which 1504 responded, a response rate of 94% (Waits & Lewis, 2003)**.** By projecting the responses received for the whole nation, they estimate that for the 2000-2001 academic year, 56% of all 2 year and 4 year degree-granting institutions offered distance education courses. They also project an estimated 3,077,000 students enrolled in distance education courses. Of the institutions that reported using distance education, 90% reported using asynchronous computer-based instruction, 43% use synchronous computer-based instruction, 51% use two-way video with two-way audio, 41% use one-way prerecorded video, 29% use CD-ROM, and 19% use multi-mode packages (ibid). This demonstrates how pervasive distance education has been, and it also highlights the emergent prevalence of computer-based technologies in this field.

With such wide spread use of distance learning courses in higher education, the next logical question is why are so many students attracted to distance learning? The simple answer is that distance learning courses and blended learning courses grant students more flexibility. For example, a key characteristic of online courses that have replaced face-to-face courses is "a reduction in class-meeting time, replacing face-to-face time with online, interactive learning activities for students" (Twigg, 2003, p. 32). This allows students with families, jobs, and other time constraints to participate in language courses while juggling other responsibilities simultaneously. From the institutions' perspective online courses allow them to satisfy multiple objectives including: increasing student access, reducing time constraints, reducing institution costs, increasing new student audiences, increasing student enrollments, and meeting the needs of local

employers (Waits & Lewis, 2003, p. 15). As can be seen from this description, online

learning serves to benefit students and the institutions at which they are enrolled. Again,

this is accomplished primarily because distance learning allows universities to offer

meaningful and flexible instruction.

Online Learning

Building on the discussion of distance learning, I will now shift my focus

exclusively to online learning. Here, I will attempt to demonstrate how pervasive online

learning has become, and I will distinguish *online learning* from other forms of learning

which utilize the Internet and computer-based technologies. Reporting on the Current

Population Survey data from the 2000 U.S. Census Bureau, Newburger (2001) indicates

that 54 million households or 51% of all households had a computer, an increase from

42% in 1998. He also states that 44 million households or 42% of all households used the

Internet in their home (pp. 1-2). More recently Internet World Stats reports that as of

September 18, 2006, 1.09 billion people are using the Internet ("Internet World Stats:

Usage and Population Statistics,"). It can be safely assumed that all of this reported

Internet usage in the United States is not for the sole purpose of education; however, we

cannot deny that the Internet serves an essential role for educational purposes.

For educational purposes online learning is a process by which individuals

acquire knowledge by studying, personal experiences, or direct instruction, which takes

place in an Internet-based environment using computer-based technologies for

interaction, instruction, and communication. Online learning is also referred to as

e-learning or online education. Before considering online language learning specifically, it is important to understand how wide spread online learning has become in the broader field of general education. With the advent of the Internet and multimedia, and especially increased capabilities of the microcomputer, online learning at the college level has grown tremendously. Two insightful studies have been conducted which collected information for online learning at higher education institutions, Allen & Seaman (2006) and Allen & Seaman (2003).

The first, (Allen & Seaman, 2006), reports on a survey-based study designed to collect information regarding online learning from higher education institutions across the United States. The study sampled 4491 institutions of which 2472 responded, resulting in a 55% response rate. They report that 3.2 million students took at least one online course in fall 2005 term, an increase from 2.3 million in the previous year. In the 2006 study, they also found that large public institutions offer more online courses than other institutions and that online students tend to be older, hold employment, and have increased family responsibilities (ibid). This is especially relevant to the current study which will take place at a large university that has a variety of students.

The second study, (Allen & Seaman, 2003), reports on a similar internet-based survey, which was distributed vial email to the Academic Officers or the President of the institutions across the United States. 3,033 surveys were sent and 994 were returned, a response rate of 32.8%. They report that 81% of all institutions of higher education offer at least one fully online or blended course and among public institutions more than 90% offer at least one online or blended course (ibid). Combined these two studies

demonstrate how deeply imbedded online learning has become in higher education of the United States.

From these two studies it is apparent that online learning is widespread, but they also demonstrate that online learning exists in a variety of formats. In Table 1, Allen and Seaman (2003) define the various forms of online learning by breaking them down into separate categories: traditional, web-facilitated, blended or hybrid, and online. Bates (2005, p. 9) presents a similar definition, but he uses the phrase "fully online" learning, and with respect to CALL, Felix (2003) refers to "stand-alone online courses" and "add-on activities" (p. 8) which utilize computer-based technologies. In most cases CALL activities are used to enhance traditional classes. Most relevant to the present study, the EN LÍNEA Spanish courseware will be considered as an "online", "fully online", or a "stand-alone online" course because the vast majority, more than 80%, of the interactions take place online. Online learning is the primary means of instruction and learning.

Table 1

Description of online courses. Adapted from Allen and Seaman (2003)

Proportion of content delivered online	Type of course	Typical description
0%	Traditional	Course with no online technology used content is delivered in writing or orally.
1 to 29%	Web Facilitated	Course which uses web-based technology to facilitate what is essentially a face-to-face course. Uses a course management system (CMS) or web pages to post the syllabus and assignments, for example.
30 to 79%	Blended/ Hybrid	Course that blends online and face-to-face delivery. Substantial proportion of the content is delivered online, typically uses online discussions, and typically has some face-to-face meetings.
80+%	Online	A course where most or all of the content is delivered online. Typically have no face-to-face meetings.

Building on the previous discussion, which attempted to define online learning in general, I will now expand this argument to include the field of SLA. In the field of SLA the phrase "online learning" has been used in a variety of contexts to refer to divergent forms of learning. For example, in a general introduction to the theory and practice of network-based language teaching Kern and Warschauer (2000) define online language teaching or learning as a process which "involves the use of computers connected to one another in either local or global networks" (p. 1). Although I have no major concerns with this definition as a starting point, this research will further distinguish "online learning", as operationalized by Allen and Seaman (2003), to refer solely to language

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courses which take place with the use of computer-based technologies, the use of the

Internet, and of which at least 80% of the course interactions are conducted online.

Having made this distinction between online language learning courses and other courses

which use a blended approach to distance learning, it is now possible to move forward

with this research related solely to online learning using the EN LÍNEA online

courseware.

Current Online Tools

After seeing how pervasive online learning has become in the United States, it is

important to note that online learning appears to have been widely accepted in large part

because of the flexibility and convenience afforded by a wide range of technology-based

tools. To continue with a discussion of online learning I will now provide an overview of

the innovative tools available, and often implemented, in the field of online learning. A

more in depth discussion of these technologies, as they relate to CALL and CALL

research, comes later in the literature review. First, it is essential to make note that amidst

the array of state-of-the-art technologies there is a plethora of available online learning

tools, which make self-directed learning and interaction possible.

There is such a variety of available online tools, and new tools are created so

rapidly, that at times it becomes difficult to keep up with these cutting-edge technologies.

Having said this, it does prove beneficial to attempt to categorize online learning tools so

that instructors and learners may better understand their use. This categorization will also

aid in this research by providing an overall framework for describing the technologies

according to the impact that they have on the learning process. Currently, there are

several existing frameworks which attempt to accomplish this. Poole, Sky-McIlvain, and

Jackson (2004) use five categorizes to describe this potential impact: skill reinforcement,

human interaction, assessment, research and resources, knowledge construction (p. 247).

Likewise, in 2007 the International Society for Technology in Education (ISTE)

published a new set of National Educational Technology Standards, which identified

creativity and innovation, communication and collaboration, research and information

fluency, critical thinking, problem-solving, and decision-making, digital citizenship, and

technology concepts and operations as themes for categorizing computer-based tools

(Education, 2007; *The National Educational Technology Standards for Students: The*

Next Generation, 2007).

When attempting to categorize online learning tools according to the frameworks

established by Poole, et al. (2004) and ISTE (*The National Educational Technology*

Standards for Students: The Next Generation, 2007), it becomes obvious that each tool

may serve multiple purposes. For example, a web site may be used as a resource for more

information or it may be the final product of a student's learning, which is then published

online. This can be seen in Table 2, which was created by combining these two

classification systems and drawing from the information about computer-based

technologies provided in Barron, Ivers, Lilavois, and Wells (2006), Bates (2005), and

Godwin-Jones (2000). Table 2 is intended to organize the available online tools into

functional categories. This classification will enable referring to these tools more easily

later in this study.

Table 2

Classification of online learning tools. Adapted from Poole, et al. (2004), ISTE (*The National Educational Technology Standards for Students: The Next Generation*, 2007), Barron et al. (2006), Bates (2005), and Godwin-Jones (2000).

Skill reinforcement	Human interaction and communication	Productivity	Assessment	Research and resources
Simulations Virtual reality Software CD-ROMs	Email Listserv Synchronous chat Bulletin board Desktop conferencing Mobile phones PDAs MP3 files Blogs Wikis	Web sites PPT Word Excel Digital camera Scanner	E-Portfolios	World Wide Web sites CD-ROMs Scanner Software MP3 files Movies Internet Digital camera Search engines Digital video

I believe that the tools for human interaction are perhaps the most profound and the most useful for online language learning. These are communication-based technologies, which are frequently separated into synchronous and asynchronous mediums (Barron et al., 2006; Bates, 2005). Again, it is important to note that innovative, state-of-the-art technologies do not ensure quality learning experiences; however, as Thorne and Payne (2005) describe, the innovation of these types of tools moves online learning "far beyond the computer alone". They further expand the possibilities for communication and pedagogical opportunities. Each of these innovative technologies encourage collaboration by allowing the users, online learners, to establish connections with people that otherwise were not reachable.

The next two technologies described, learning management systems (LMS) and online courseware, vary from the more succinct categories established previously. Both utilize computer-based technologies and the Internet to offer an alternative delivery of instruction, but they also contain many of the technologies described previously. A learning management system (LMS) is a software application or Web-based technology used to organize instructional materials, deliver instruction, keep track of student participation, and manage student grades. Many learning management systems, such as Blackboard and WebCT, also provide students with the ability to interact via threaded discussion boards, computer-mediated chat, and video conferencing. In the context of the present study, Blackboard is used for organizing and maintaining student grades and course information.

Like LMSs, online coursewares are educational software that deliver instruction and course materials, and offer resources via computer-based technologies and in most cases via the Internet. A major distinction between LMSs and online courseware is that LMSs provide more opportunities for instructors to create their own materials; whereas, online courseware is generally completed products produced by content specific publishing companies. The EN LÍNEA program is an example of such online courseware. Created by Vista Higher Learning, it enables students to study and learn Spanish at a distance. In essence, EN LÍNEA is a sort of learning management system designed specifically for Spanish courses, but it also offers more than the typical LMS. The content and instructional materials are predetermined much like a textbook, and in many cases there is little opportunity for instructors to create and add their own materials to the

courseware. It is important to note that learning management systems are not designed

specifically for language courses, and as a result they do not contain several key

components, which are beneficial to language learners such as online dictionaries,

tutorials, verb conjugation resources, etc. Levy (Levy, 1997, p. 181) identifies the

functionalities provided by courseware as data handling, linguistic tools, multimedia,

didactic tools, administrative tools, and networking tools. EN LÍNEA, the online

language courseware which is the focus of the present study, contains most of the tools

described previously. A more in depth description of EN LÍNEA is provided in chapter 3.

Before the emergence of these computer-based technologies and the Internet,

distance education was utilized primarily for student populations which were limited in

their access to education based on gender, disabilities, time conflicts, and location. In

addition, such distance learning opportunities represented a relatively small percentage of

university course offerings. However, now in the 21st Century, for universities and

schools across the United States and many other countries, distance learning via

computer-based technologies and the Internet has become a more widely accepted

alternative to face-to-face courses, including traditional foreign language courses. As

described here, distance education and the array of ever-changing technologies have

steadily revolutionized how colleges and universities offer courses by affording the

students greater opportunities for self-directed learning, collaboration, and interaction

(Levy, 1997). Rapid development and implementation of technology, including the

development of new online tools, makes it very difficult for SLA researchers and

educational professionals to keep up. This presents a challenge to maintain a current and

quality body of research which reflects the most recently created technologies. The present study attempts to meet this challenge by investigating an online courseware which has not been researched formerly.

Section Summary

In summary, this discussion has placed online learning in a broader, socio-historical context, drawing from the fields of general education and distance learning. Initially, distance learning was conceptualized and developed to aid in alleviating the restrictions caused by time and space. This field of education has offered and continues to offer educational possibilities for a larger audience that may not have had the opportunity for education previously. More specifically, online learning has evolved gradually as computer-based technologies have been developed.

The discussion of online learning has distinguished online learning from blended learning and other forms of technology-enhanced courses. Moving forward with a clear definition for online learning also allows the researcher to distinguish this research from other research conducted previously with varying forms of technology-enhanced learning. The popularity of all computer-based technologies is based largely on the flexibility and potential for interaction at a distance that is provided by the array of technology-based tools. Online learning tools allow students to access a plethora of information on demand. In an online learning environment the learners have the ability to learn individually and collaboratively. The tools described, such as email, bulletin boards, and chat, afford students opportunities to connect with others synchronously and asynchronously. Online learning environments also provide arenas for course content to

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be structured effectively and made available in a variety of formats. For example, text, audio, and video materials can be integrated easily in this environment.

Last, highlighting these key characteristics of online learning and online tools has aided in establishing the general context for the present study. This discussion is also meant as a beginning reference point for computer assisted language learning (CALL). As will be described next, the field of CALL relates directly to language learning and the use of technologies.

Past and Future Directions for CALL Research

Within the broader context of distance learning and online learning, there is a smaller and less developed field of research, CALL, which relates directly to computer-based technologies and language learning. This field, computer-assisted language learning (CALL), is a type of learning and an approach to teaching languages, which utilizes computer-based technologies to deliver instruction, to provide arenas for the learners to rehearse their language learning, and to provide means of communication and interaction between the instructor and the learner and the learner and other learners. Simply put, CALL is the use of computer-based technologies to assist individuals with their language learning. This is also referred to as technology-enhanced language learning (TELL). In the subsequent sections I will attempt to provide a discussion that distinguishes CALL research from evaluation studies, overviews the brief history of CALL, and draws some implications from CALL research for future studies.

Distinguishing CALL Research from Evaluation Studies

As previously described in chapter 1, the purpose of the study is to investigate the learning processes of online language students with a focus on their use of mediational tools and resolution of contradictions. To further clarify the scope of this study, this section of the literature review aims to elucidate the difference between the defining characteristics of this research study in comparison with traditional, CALL evaluation studies.

Within the field of CALL, evaluation studies are geared towards providing the appropriate information for which to base a decision about adopting a particular program or product for educational purposes. This type of evaluation has also been called software or product evaluation. For example, Chapelle (2001) describes six criteria for evaluating CALL: language learning potential, learner fit, meaning focus, authenticity, positive impact, and practicality. These descriptors for evaluation focus on the potential benefits that CALL demonstrates for language learning. Burston (2003) also offers a comprehensive description of CALL evaluation. He claims that before any CALL software can be purchased, it must meet the first two of the following requirements and a combination of the last three descriptors:

1. Pedagogical validity
2. Curriculum adaptability
3. Efficiency
4. Effectiveness
5. Pedagogical innovation

Based on the keywords of these requirements, and much like Chappelle's (2001) descriptors for CALL evaluation, it becomes apparent that these requirements further

exemplify how CALL evaluation is more intended to note potential benefits of a

particular program or software. The present study is markedly different from these ideas

of evaluation, because this study is intended to investigate actual learner processes.

After discussing CALL evaluation, it is also important to further distinguish

between *evaluation* and *research* to complete the shift from evaluating a product to

looking at student learning. For example, Johnson (1992) makes a clear distinction

between research and evaluation studies, "The purpose of an evaluation study is to assess

the quality, effectiveness or general value of a program or other entity. The purpose of

research is to contribute to the body of scholarly knowledge about a topic or to contribute

to theory" (p. 192). Based on these definitions, the current study adheres principally to

research. It does not attempt to evaluate the value or effectiveness of the CALL materials

provided in EN LÍNEA. This research is not intended to answer the question; does EN

LÍNEA work to aid in learning Spanish? It is intended to gather information which will

provide a description of how the learners interact with the courseware in the process of

reaching their outcomes.

In addition, whereas the use of a strong theoretical background is necessary in

research, the use of a particular theory in evaluation is not as important. Saba (2000)

echoes this, "Research questions are rarely posed within a theoretical framework or based

on its fundamental concepts and constructs." Most evaluative and comparative studies

have not included a discussion of theory in their research. This is also apparent in

Chapelle's (2001) six descriptors for evaluation. No particular theory drives these

categories. Last, none of the descriptors allow for examining the interactions that take

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place between the individual learner and his social environment. In the current study this interplay between the individual and the social environment is paramount.

The aim of this research was to contribute to theory and practice in SLA and CALL. I wanted to describe how the learners interacted with the courseware, to see what types of disturbances they encountered as they attempted to learn, and to see how they resolved these to reach their learning outcomes. In this manner this research distinguishes between the potential effectiveness of EN LÍNEA based on its technological capabilities and what learning processes actually occurred through the technology-based tools. This marks the essential shift from evaluating CALL products to looking at actual student learning in CALL.

Historical Overview of CALL

CALL as a field of instruction and research is said to have originated in the 1950s under the name of computer-assisted language instruction (CALI). The original CALI programs were developed for mainframe computers, and they primarily supported individual tutorials. This is the paramount disparity between the original CALI programs and what is known as CALL today. In the 1980s, many people began using the name computer-assisted language learning (CALL), and although other names have been used such as technology-enhanced language learning (TELL), CALL remains to be the predominantly used.

Throughout the history of CALL its development has directly reflected the accepted learning theories of the time period and the capabilities of the computer. Warschauer (1996) and Warschauer & Healey (1998) have categorized this development

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into three phases, which they call behavioristic CALL, communicative CALL, and integrative CALL. Although some have criticized this designation of phases in CALL, questioning the nomenclature used and whether the phases refer to historical time periods or categorical perspectives (Bax, 2003), they have been widely used in the field (Felix, 2003; Lee, 2000; O'Bryan & Hegelheimer, 2007), and this organization will be used here to describe the historical development of CALL and its research. It is important to note, however, that as Bax (2003) indicates these stages have now come to coexist in some instances. For this reason I have attempted to isolate the major CALL research projects according to their most congruent stage, but it is understood that some projects could be attributed to more than one phase based on their defining characteristics.

Behavioristic vs. Communicative CALL

This discussion of CALL research begins with the juxtaposition that exists between two schools of thought in the initial stages of language learning, behaviorism and communicative-based learning. Behavioristic CALL dates back to the 1950s and was fully developed in the 1960s and 1970s. It was based on behaviorist theories of learning, which placed an emphasis on grammar rehearsal through "drill and practice" or "drill and kill" (Hart, 1981). Under this approach learning was regarded primarily as habit formation in response to repetition, and it was exemplified by the use of the language laboratory. Language students were expected to learn primarily through constant repeating and practicing. During the two decades in which behavioristic CALL was prevalent there were two projects which were integral in its early development and implementation, PLATO and TICCIT.

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Under the guise of behavioristic CALL the project for Programmed Logic for Automatic Teaching Operations (PLATO) was designed at the University of Illinois in 1960 for the purpose of providing self-paced instruction for a group of students. In its original from it focused on vocabulary and grammar drill exercises, and it allowed only one classroom to connect at the same time. Gradually the number of students that the mainframe computer system could support began to grow exponentially. Research conducted with PLATO focused primarily on the "drill and practice" nature of the technology. Although this environment allowed the teachers to make better use of class time, no distinct advantages were associated with PLATO versus the classroom environment (Atkinson, 1972; Hart, 1981).

Roughly a decade later the project for Time-Shared, Interactive, Computer Controlled Information Television (TICCIT), was designed and implemented at Brigham Young University in 1971. It combined the use of television-based and computer-based technologies to offer instruction for a college-level English course via an interactive cable television system. Merrill (1980) noted that the system allowed the students a great amount of control over their learning. In addition, Alderman (1978) found that there was no significant difference in the performance levels of students in face-to-face, traditional classes versus the students using TICCIT. The limited body of research generated from the PLATO and TICCIT programs has served as the foundation to behavioristic CALL and the point of reference for the future generations of CALL. Behavioristic CALL, as described here, dominated the SLA field until the end of the 1970s. By this time the

behavioristic learning theories were gradually replaced by an array of cognitive and humanistic learning theories, which served as the impetus for the next phase of CALL.

In the 1970s and 1980s communicative CALL spread in large part due to the prevailing influence of the communicative approach and the development of the microcomputer. John Underwood was a major proponent of the communicative approach, and he is also the author of a widely used CALL textbook *Linguistics, computers and the language teacher* (1984). In this text Underwood highlighted the major contentions of the communicative approach among which include encouraging a focus on communication in the target language rather than learning and teaching grammar implicitly. These principles were also adopted for communicative CALL. In this phase of CALL usage, the computer was viewed as a tutor, stimulus, or tool such as word processors, spell and grammar checks, and publishing programs. The defining characteristic of communicative CALL was the effort to provide the learners with opportunities for authentic communication. At the time this new emphasis on meaningful communication was in direct contrast to the "drill and practice" of behavioristic CALL.

Utilizing the communicative approach, the Athena Language Learning Project (ALLP) was created at the Massachusetts Institute of Technology (MIT) in 1983. This project included communication materials for Spanish, French, German, Russian, and English as a Second Language courses. It created a computer-based environment, or "network-based distributed computing services", which supported 10,000 users (Arfman & Roden, 1992). In this environment the students were able to access the files posted in the system from any workstation within the network. Published research related to ALLP

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was scarce, but Arfman and Roden (ibid) report that as a result of using Athena the faculty "changed their teaching methods, making their face-to-face contact with the students more productive, and helping them develop intuitive learning in their students" (p. 551). In addition, Lampe (1988) reports that a major contribution of the project is the beginning traces of multimedia for language learning.

Combined, behavioristic and communicative CALL have served as the foundation to a field that has continued to evolve over its brief history. Research conducted in these two phases of CALL has demonstrated that technology-enhanced learning can be comparable to face-to-face learning. In addition, this form of learning and teaching through technologies is both enabled and limited by the power and capacity of the technologies themselves.

Current Status of CALL

Towards the end of the communicative CALL phase, as labeled by Warschauer (1996) and Warschauer & Healey (1998), many researchers and educational professionals began to question the viability of CALL. This led to a desire for a more integrative approach to utilizing CALL, in which its use was not isolated to a specific realm of language learning, but rather it would become integrated fully into the language learning experience.

From the 1990s and into the present the focus of CALL has been implementing CALL where its usage has been thoughtfully integrated, or meaningfully inserted, to create an optimal learning experience, but also that the use of the technology flows naturally and meaningfully with the context of the material learned. This focus has been

greatly enabled by the vast development of multimedia and the Internet, which has served

to simultaneously solidify the role of CALL in language learning and instruction and

revolutionize the field of CALL. The early stages of CALL, behavioristic and

communicative, were not accepted completely because computer functions were

rudimentary in comparison. However, in the 1980s and the 1990s graphical user

interfaces and integrated media were developed, which caused a resurgence of interest in

CALL (Pusack & Otto, 1997) and ultimately created more avenues for the integration of

CALL in language learning. Liu et al. (2003) also acknowledges this shift in focus on the

acceptance of technology to the idea of how to effectively integrate technology.

My view on integrative CALL is that the field will likely remain here indefinitely,

or at least until computer-based technologies are fully integrated and accepted in

language teaching and learning. Bax (2003) described the process of *normalization*, in

which CALL is truly integrated. He claims that normalization occurs when technology

becomes invisible like a textbook. As such Bax (ibid) describes the end goal of CALL as

reaching normalization in which the technology seemingly fits in without a second

thought. For example, he describes how college students do not think twice about the idea

of having to use textbooks for their courses. Technology, on the other hand, is just now

reaching a sort of "normalization" in some fields and institutions, but I could not say

outright that CALL has been completely normalized in the context of language learning.

Having said this, in the present study it can be argued that the EN LÍNEA courseware

does represent this form of normalization because it is the main medium of instruction

and learning.

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Continuing with this discussion, I will now offer a brief explanation for

multimedia and the *Internet*, which are the staple components of integrative CALL.

Pusack & Otto (1997) define multimedia as the "capacity to access and control via

computer a full range of familiar media: text, motion video, photo images, sound, and

graphics." On the other hand, the Internet is an electronic network of computers across

the world which is connected by a common system or systems of communication. These

developments together have allowed more authentic materials and interaction, which are

easily integrated into the overall structure of the courses, and more student control over

accessing the materials and ultimately their learning.

Integrative CALL research concerning the Internet and multimedia has been

exemplified by the work conducted with the Daedalus Integrated Writing Environment

(DIWE) (Beauvois, 1992; Chun, 1994; Kelm, 1992; R. Kern, 1995). The research

conducted with InterChange of Daedalus, a synchronous form of CMC, which was

developed by Fred Kemp at the University of Texas in the 1980's for the purpose of

developing writing, has demonstrated several of the benefits commonly associated with

CMC: leisurely paced, less threatening, high amount of writing, more turns and

messages, more learner control, planning and editing, lots of comprehensible input,

reading and writing practice, and motivation (Ortega, 1997).

Other research within the integrative CALL phase has focused primarily on text-

based computer-mediated communication, synchronous and asynchronous, and results

have shown a variety of benefits (Chapelle, 2001; LeLoup & Ponterio, 2003; Liu et al.,

2003; Ortega, 1997). After examining the transcripts of these types of interactions, the

results from previous studies have indicated that while using CMC there is increased

student communication and more equal participation among the students (Beauvois,

1992; Blake, 2000; Kelm, 1992; R. Kern, 1995; Warschauer, 1997). There has also been

empirical support that indicates that the linguistic output from a CMC-based environment

resembles that of oral output (Beauvois, 1992; Chun, 1994; Kelm, 1992). In addition,

other studies have indicated a positive effect on the learners' motivation (Stepp-Greany,

2002; Warschauer, 1997).

Next, to continue with a fruitful discussion of CALL, we must then consider the

necessary components which make CALL usage a worthwhile experience for the

language learners. Pusack and Otto (1997) describe three necessary characteristics for

CALL and technology integration: the combination of multiple media (multimedia),

increased learner control, and interactivity. Also, if CALL is integrated into the language

learning experience, as a result it provides the opportunity for collaborative work,

exploratory learning, access to more authentic materials, more interaction, and higher

motivation (Egbert & Hanson-Smith, 1999; Egbert, Paulus, & Nakamichi, 2002;

Warschauer & Healey, 1998).

In an attempt to further define the key characteristics of CALL and CALL

research, Leloup and Ponterio (2003) conducted an insightful review of CALL research

published in major research journals. They report that most of the CALL research utilizes

an interactionist theoretical framework, which emphasizes input, intake, output,

negotiation of meaning, and attention to form and meaning. The authors cite only two

cases (Appel & Lantolf, 1994; Warschauer, 1997), which have investigated CALL

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employing a sociocultural perspective, and these studies focused on the learners' social and cultural surroundings and conditions. These general findings imply that CALL research has been somewhat limited in focus, and that the field could benefit from a new slant on future research. To accomplish this Ortega (1997) suggests that researchers combine quantitative and qualitative analyses and that researchers stray from comparing face-to-face and electronic environments. Ortega (ibid) also calls for more qualitative research of CALL to include observation, questionnaires, think-aloud protocols, and computer-collected data. CALL research should take a change to include factors other than linguistic output.

Similarly, Liu et al. (2003) reports on a review of research conducted with CALL from 1990 to 2000. The authors claim that 13 of the 33 studies reviewed have minimal theoretical underpinnings, while 20 have sufficient theoretical background. Only 5 were purely qualitative while 65 were experimental or mixed methods studies. They also indicate that the qualitative studies focused primarily on students' perceptions and experiences with technology. In closing, Liu et al. (ibid) also calls for the incorporation of learning theory with CALL research.

Section Summary

From the previous description of CALL, it is evident that computer-based technologies have the potential to serve many purposes in language learning. Likewise, past CALL research leads to several implications for future CALL research, including the present study. Specifically, the discussion here has highlighted the distinction between

evaluation and research, the over emphasis of CMC research, and the need for adequate theoretical framework and varied research methods.

First and foremost, a clear distinction was established between research and evaluation. Again, this study does not intend to evaluate the EN LÍNEA courseware. Furthermore, whereas CALL evaluation and much of the previous research has investigated the role of CMC, this study will focus on online language learning as operationalized previously. The present study will draw from past research, noting the perceived pedagogical benefits including the capacity for interaction and collaboration via computer-based technologies; however, it will also take a broader view of online learning in context with the goal of not focusing too narrowly on one particular online tool.

Also, the research base diverging from evaluation studies and building on CMC investigations serves to highlight the key characteristics of the present study including a strong theoretical framework and the use of varied research methods. My argument here is that online learning, and in particular online language learning, is too complex of a process to minimize the discussion to isolated variables. Online language learning can only be completely understood in its full context, and to accomplish this, a strong theoretical background and the use of more qualitative research methods is necessary. In conclusion, the present study will attempt to fill some of the gaps as indicated in this discussion of CALL and CALL research.

Research in Online Language Learning

The previous discussion of CALL was intentionally limited to isolated CALL

tools like CMC, which is used vastly for add-on tasks in face-to-face courses. Here,

online language learning research will be treated as an extension of CALL. In this section

I will offer a critical analysis of the research conducted with online language learning.

This analysis will also describe the contributions and shortcomings of the research as

they apply to the current study.

Thus far, research in online language learning has covered a variety of topics.

Only a few of these topics have been selected for discussion here, including: evaluation

and design of online learning, and learner characteristics and learner autonomy. These

topics have been selected because they are indicative of the field of research in online

language learning. This discussion of research is not intended to be all inclusive;

however, the intent is to illustrate the major assertions relevant to the present study. For a

more thorough review of online language learning, refer to Felix (2003), Egbert &

Hanson-Smith (1999), and Kern & Warschauer (2000).

Design and Evaluation

Design of online learning is an appropriate topic of investigation in online

language learning research because it proposes to examine the processes by which

activities are designed to produce the most beneficial learning results. In this manner

decisions about instructional design in online language learning are based on perceived

pedagogical benefits and learning theories. In addition, much of online language learning

research focusing on design also contains a component of evaluation.

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For example, Sawatpanit et al. (2003) describes an evaluation of BRIX, an environment used for the development of online language courses. It was created by the National Foreign Language Resource Center (NFLRC) at the University of Hawaii for use in online courses to focus on reading, writing, and listening activities. The study presents a comparative evaluation of a Chinese course in BRIX with a hand-crafted online Chinese course. It evaluated the usefulness and effectiveness of the tools by measuring students' use of these tools. The data sources included an opinion survey and measures for the frequency of tool use as recorded in server files. There were 54 participants from the hand-crafted course and 21 participants from the BRIX environment. Results from the study showed that BRIX students revisited the Language Bank 72% more often than the other students, and that their participation in the discussion forum was higher. Drawing from this information, the authors conclude that collaborative learning and self study should be supported in online learning through the courseware technologies. Although this appears to be an acceptable assertion, it is problematic that their main results are based on percentages of usage.

Another study related to design of online learning (Strambi & Bouvet, 2003), like the majority of research related to online language learning, investigates a "mixed-mode environment", or a blended learning environment. Although this type of learning environment is not directly representative of the online learning courseware being researched here, the results and conclusions of this research do yield fruitful and relevant information. The study reports on the design and development of an Italian course and a French course in Australia. During the investigation the researchers encountered two

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major challenges for design of the mixed-mode environment, sufficient flexibility and authenticity and interactivity. They conclude that learners are often at different levels of language proficiency, and that flexibility and interactivity will allow each learner to account for these differences at their own pace and by their own means.

Judging from these two studies conducted with a focus on design, and subsequently evaluation, OLL should provide opportunities for collaborative learning, self-study, flexibility, and interaction. These assertions also appear to support the general findings of the CALL research previously described.

Learner Characteristics and Learner Autonomy

As just noted opportunities for collaborative learning, self-study, flexibility, and interaction are important for online language learning, and they are so because many learners begin online courses with varying characteristics, including different levels of learner autonomy. It is important to note that learner autonomy is considered to be a significant strand of research in online language learning primarily because this environment is also considered highly learner-centered.

With this in mind, Hobrom (2004) investigates learner autonomy by viewing the learner, teacher, instructional materials, and the context. He poses the questions: what are the learners' perceptions as autonomous learners, what is the value of online resources in aiding learner autonomy, and what features of online resources aid learner autonomy? In short, the study investigated online students' self-perceptions as autonomous learners. The study lacked sufficient description of the setting for the course in which the study was conducted. Also, because it refers to online resources it is assumed that the resources

were used in conjunction with or as an add-on to an existing face-to-face course. Data

was collected in regards to five students of Arabic in the United States. Data collection

included interviews (students and instructor), journals, and a review of the syllabi. Aside

from the syllabi review, all of the data collected was self-reported by the students. This in

itself is problematic because it places too much authority and significance on self-

reported data. Other sources of data from different perspectives would be beneficial for

accurately and completely portraying the students' use of online resources.

The results indicate that the students perceived themselves as being autonomous.

They noted taking more responsibility, being more motivated, improvement in language

skills, and being able to self-evaluate throughout the course because of the online

environment and available multimedia materials. They appreciated being able to practice

on their own without embarrassment in front of teacher and other students, and they felt

that the multimedia made online learning interesting and engaging.

The most problematic component of this research is that it has a very loose

theoretical framework. It uses what the author calls a "conceptual framework", being that

of learner autonomy. This is more of a concept or a tool for describing one aspect of

learning, not a theoretical framework for which to base an investigation of online

learning. I feel that a stronger theoretical background is needed to fully explain the

learning processes described in the study. There is also a heavy reliance on self-reported

data. The author cites this as one of the limitations of the study. He also states that his

dissertation committee persuaded him not to conduct field observations as a means of

data collection even though it was a part of the original design for the research. He then

explains, "Because the participants were going to talk and write about their online activity in the interviews and journals anyway, there was no point in observing them actually work on their assignments online" (ibid, p.94). This statement is the epitome of over reliance on self-reported data. Observations of actual learning processes would aid in verifying self-reported perceptions, and they would offer the researcher first hand knowledge of what is being described by the participants. As such, it is understandable to accept that the learners perceived themselves to be autonomous, but is difficult to accept the results that the students were autonomous in the online environment.

A second study, Murday (2004), was conducted to investigate individual learner differences and how the students adapt in online learning environments. This research was conducted in stark comparison to the reliance on self-reported data in Hobrom (2004) as just described. This study aims to establish students' actual behaviors through observation, self-report, outcome measures including review of exams, orals, grades, and student satisfaction, and a review of learners' language and technology backgrounds. The researcher focuses primarily on learning styles, learning strategies, motivation, anxiety, and students' beliefs. I feel that this limits the scope of the research. It also has the potential to artificially narrow what is observed. Specifically, the researcher asks, can the difference between online language learners and regular students be attributed to their individual characteristics? Again, this appears to be a broad question.

To answer this question, the researcher follows four learners over one semester in a blended learning course including synchronous chat, email, bulletin boards, and testing by course management software WebCT. There are also weekly face-to-face class

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meetings and meetings with instructor. Results of the study indicate that two of the students adapted well, and the other two did not. The author concludes that the students' behaviors and characteristics are important in online language learning, yet no particular characteristic seems to imply success or failure. This finding seems to be somewhat broad and even contradictory. Having said this, the author does conclude with insightful recommendations for future research. He highlights the need for direct observation of student behaviors to avoid assuming that technology produces improved outcomes for language learners.

Section Summary

My research varied from the research described here principally because it investigated online language learning with limited face-to-face meetings. The course under investigation only had four required meetings for exams and four optional meetings for exam reviews. This was in comparison with weekly meetings as described in several of the studies here. Also, this research did not rely exclusively on self-reported data, and it placed an emphasis on visualizing the learners' behaviors in online learning in addition to other sources of data. Last, this study applied a thorough theoretical background, which guided all facets of the research.

Providing Theoretical Framework in CALL

Sociocultural Theory (SCT) is addressed here because it provides the impetus for the theoretical framework which was implemented in this study to address the use of the computer as a tool and to situate learners and computers in the larger context of learning.

It helps to bridge some of the gaps identified in previous section including the perceived

lack of theory in online learning research. It also serves as the foundation for Activity

Theory which will also be explicated in subsequent sections. This description of SCT will

begin with a historical and theoretical overview, which juxtaposes sociocultural and

cognitive views of SLA. Then, a description of the empirical research related to SLA and

SCT will be provided to offer empirical evidence and theoretical background to support

the benefits of using SCT in Second Language Acquisition (SLA) and Computer-

Assisted Language Learning (CALL) research. This support is the underlying

justification for utilizing SCT as the theoretical background for this study. Last, related

specifically to the focus of this study, I will discuss mediation and mediational tools. This

review of SCT is not intended as an all-encompassing description; however its purpose is

to offer an overview of SCT and its development in SLA research.

Historical Overview of SCT

To begin a discussion of Sociocultural Theory one must first consider its creator,

Lev Vygotsky (1896-1934). Vygotsky obtained a law degree in Moscow but preferred

working in psychology. He lived during the Russian Revolution in 1917 and Stalin's

Marxist revolution in 1920s and 1930s Russia. His principal goal as a researcher and a

theorist was to develop a psychological theory based on the Marxist philosophy, which

explained that the structure and practices of socially organized labor provide the context

for how people act and think. Marxism was developed by Karl Marx in the 1800s and

was the theoretical foundation for the struggle of the working class to attain a higher form

of human society, also known as socialism. It is important to note that Vygotsky was a

contemporary of Piaget, but he did not agree with Piaget's theory of learning or the stages

of cognitive development. He contested the dualisms inherent in psychological theories

of his time and offered an alternative means to think about the mind and development. As

such the primary concept of Vygotsky's Sociocultural Theory is that the mind is socially

mediated and all human development is socially derived.

When Vygotsky died in 1934 he left behind several prominent students including

Alexander Romanovich Luria and Alexei Nikolaevich Leont'ev who continued

developing Vygotsky's research and theories. Vygotsky's work was banned for 20 years

after his death and it did not become available in the United States until 1962 when

Thought and Language was translated into English. In 1978 a translation of Vygotsky's

Mind in Society: Development of Higher Psychological Processes appeared as well. From

this point, in the United States SCT has been applied in various fields including education

and industrial work.

Sociocultural vs. Cognitive View of SLA

Before considering the application of SCT in SLA, it is important to review its

evolution from the body of traditional SLA research. The empirical history of SLA can

be categorized into two research paradigms: behaviorist and cognitive. First, the

behaviorist paradigm focuses on the learner's external environment and is exemplified by

research conducted with Contrastive Analysis. The Contrastive Analysis hypothesis

stated that researchers can predict language difficulties by systematically comparing the

two languages and cultures (Lado, 1957). Under this approach to research learning was

regarded as habit formation, and the research subjects were treated like lab experiments

for the purpose of eliciting responses. Behaviorism dominated the field of SLA until the end of the 1960s.

In 1959 Chomsky began his criticism of the behaviorist paradigm with his review of B.F. Skinner's *Verbal Behavior* (1959), and in 1967 Corder first described error analysis. First, Chomsky called for a more naturalistic approach to language learning and he criticized the rigid structure of behaviorism. Second, error analysis distinguished between mistakes and errors, errors not being recognizable to the learner (Corder, 1967). These two events had a detrimental effect on the behaviorist paradigm in SLA research. The morpheme order studies conducted by Brown (1973) and Dulay and Burt (1974) marked the end of behaviorism and Contrastive Analysis in SLA and began the cognitive approach. The research conducted under the cognitive paradigm has focused on the individual's internal processes as the source of cognitive development. This type of research has dominated the field of SLA over the past 45 years. The cognitive tradition in SLA is based on Cartesian philosophy. "I think, therefore I am". According to Descartes, a separation exists between the mind and the body (1966). Within the cognitive tradition researchers have emphasized: generalizability, uniformity of human mental processes, universality of rule-governed mental behaviors, one reality, a complex information processor, a stressed importance on internal processes rather than external, an innate predisposition to evolve cognitively, the external world as a trigger, and quantitative studies.

As a response to the dominance of the cognitive tradition in SLA research, researchers have questioned the unproblematized constructs in SLA: starting with Numa

Markee (1994) who called for nomothetic research and Firth and Wagner (1997) who questioned such constructs as 'native speaker'. Johnson (2004), among others, questioned the conduit metaphor and introduced the idea of the participation metaphor. It proposes a new tradition, dialogical, which considers the learners' external and internal processes involved in cognition. It accounts for individuality and sociocultural and historical contexts, and interaction is viewed as a social function (ibid). SCT helps to explain the language learning process by eliminating the boundary between learners' mental and social processes. Thus, mental and social processes merge together in a dialectic relationship (ibid). This is in direct contrast to the cognitive paradigm as exemplified by Long's (1997) response to Firth and Wagner (1997), "…most SLA researchers view the object of inquiry an internal, mental process" (p. 319). From Long's description of SLA, the social factors involved in language learning are secondary to mental processes and of relatively minor importance. In hopes of expanding the conceptual scope of SLA research, SCT researchers have attempted to include an examination of the learner and his or her social environment in the learning process.

Theoretical Overview of SCT

Vygotskian Sociocultural Theory provides a theoretical framework for investigating the processes of development and the mediated mind. The basic tenets of SCT were originally stated in *Thought and Language* (Vygotsky, 1962) and *Mind and Society: The Development of Higher Mental Processes* (Vygotsky, 1978). The three most prominent concepts include the genetic domains of analysis, the social origin of development, and mediation.

Genetic domains of analysis

Vygotsky claimed that researchers must use *genetic analysis* to better understand individual development by examining the social and cultural history of the developmental processes and the individual. He stated very specifically that researchers do not have to concentrate "on the *product* of development but on the very *process* by which higher forms are established" (Vygotsky, 1978, p. 64). This shift in focus from the product of learning to a new focus on the "process of change" epitomizes the approach of SCT research. The four genetic domains of analysis described by Vygotsky include: *microgenesis* (focusing on development in a short period of time), *ontogenesis* (focusing on development of the individual as he/she matures over time), *sociocultural history* (focusing on how tools have been developed throughout the history of a human culture and passed down from generation to generation), and *phylogenesis* (focusing on the development of humans throughout evolution in comparison to other species) (Vygotsky, 1962, 1978).

Of the four genetic domains ontogenesis has been the most commonly used in research. Within ontogenetic analysis as described by Vygotsky the preferred unit of analysis is "word" and its use as a mediational tool. Using "word" as the unit of analysis has been contested by several scholars who have utilized the "activity" as the unit of analysis in SLA research (Appel & Lantolf, 1994; Lantolf & Pavlenko, 2001). This shift in the unit of analysis will be discussed further in the section describing Activity Theory.

Social origin of individual development

SCT theorizes that the social environment is the most important factor in individual transformation. This is to say that transformation is inevitable, a drastic distinction from the Piagetian view of development. Thus, higher mental functioning begins in the social world, and social factors can override biological factors in the development of higher mental consciousness. Vygotsky explicates this component of SCT by describing how each developmental function appears twice; "first in the social, later in the psychological, first in relations between people as an interpsychological category, afterwards within the child as an intrapsychological category" (Valsiner, 1987, p. 67). He goes on to explain that "all higher psychological functions are internalized relationships of the social kind" (ibid). As such individual development is reliant upon the assistance of others through social interaction.

Vygotsky best explained the role of this assistance with his definition of the *zone of proximal development*. He defined the zone of proximal development as "the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under the adult guidance of an adult or in collaboration with more capable peers" (1978, p. 86). This definition highlights the difference between actual and potential development. The actual development is what the individual can do independently without assistance. *Scaffolding*, originally discussed by Bruner and Sherwood (1975), Wood, Bruner, and Ross (1976), and Bruner (1980, 1983) , is this form of assistance which aids in creating and maintaining the ZPD. Scaffolding is generally defined as a strategy by which one person

provides support to another person in order to reach a higher level of understanding. Examples of scaffolding include: instruction, modeling, questioning, and feedback. As such acting in the ZPD is not a passive process; rather the individual learners are co-constructing knowledge. As a result of scaffolding and acting in the ZPD the less capable learner should gain more autonomy in his or her learning as he or she becomes less dependent on the other person.

Mediation

The overall framework of SCT depends greatly on the fundamental concept of *mediation*. According to Vygotskyan SCT, learning and development are not the same; development of the human mind depends on the mediated function of tools and sign systems. These tools are cultural artifacts passed down from generation to generation, which have been developed to accomplish higher levels of mental activity. Vygotsky states that:

> The tool's function is to serve as the conductor of human influence on the object of activity; it is externally oriented; it must lead to changes in objects. It is a means by which human external activity is aimed at mastering, and triumphing, over nature (Vygotsky, 1978, p. 55).

Tools are typically cultural artifacts, such as paper, writing utensils, phones, and computers, which humans use to interact in the world and to achieve higher level thinking. Furthermore, *signs* are symbolic tools such as language, numbers, and diagrams, which also aid in establishing connections and problem solving. As such,

individuals cannot act directly on the world without the use of these mediational tools to *mediate* and *regulate* their interactions with the social world. Thus, the principal goal (R) of an individual's (S) human activity is to control his or her social environment and his or her own mental processes through the use of mediational tools (X). This relationship is presented graphically in Figure 1.
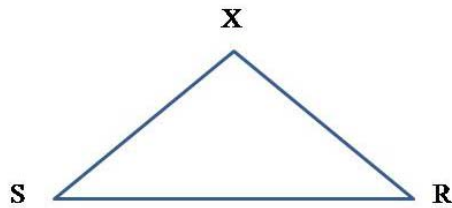
Figure 1. Graphic model for Vygotsky's mediated action

In this manner, language serves to regulate and facilitate learning and it is the mediator between the individual's two psychological planes: social plane (interpsychological) and then the psychological plane (intrapsychological). *Regulation* originates outside of the individual and moves inside (*internalization)* and is directed by language, objects, others, and the self. As such individual learning progresses through the stages of regulation: object-regulation, other-regulation, and ultimately self-regulation. During this process from the outer to the inner, *egocentric* or *private speech* serves as the organizer of private mental functioning, and private speech becomes *inner speech* when the intrapsychological plane is reached. As described language, the primary focus of Sociocultural Theory research in SLA, affords the individual the ability to control thought processes.

SCT Research in SLA

Lantolf and Frawley (1984) provides the first real introduction of SCT to the field of SLA. Building on this introduction many studies were conducted throughout the 1990's and into the 21st century, which have examined aspects of SLA with concepts derived from SCT. The following description of SCT research has been narrowed intentionally to the topics most relevant to the current study, which intends to examine the use of mediational tools. These SCT concepts include scaffolding and the zone of proximal development, and mediation and regulation. This description is not intended to be a head-to-toe analysis of SCT research conducted with SCT framework. For a thorough review of such research and theory refer to Appel & Lantolf (1994), Lantolf (2000), Johnson (2004), and Lantolf & Thorne (2006). In texts such as these, and others, researchers have applied SCT to SLA research and they have challenged what has been deemed traditional SLA research by investigating the sociocultural context of language learning.

Scaffolding and the zone of proximal development

One of the first and most advanced studies with SCT in SLA was conducted by Aljaafreh and Lantolf (1994). This study applied the construct of zone of proximal development in investigating error correction in teaching L2 writing skills. They found that negative feedback between learners needs to be collaborative, negotiated between novice and expert, graduated, and contingent. Similarly, Donato (1994) found that learners at the same level of development are capable of scaffolding each other in the zone of proximal development. His study undermined the traditional view of interaction

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by calling for a reevaluation of input, interaction, and negotiation of meaning. It was also one of the first studies to indicate that scaffolding does not have to be provided by a more capable person. Together, these two studies served to reinforce the importance of scaffolding, the zone of proximal development, and collaboration in language learning, and they established a foundation for future SCT research.

In the year 2000, three other studies continued with this line of research and introduced the idea of mutual or collective scaffolding. First, de Guerrero & Villamil (2000) observed the interaction between two ESL students that were working collaboratively to revise a narrative text. They found that the learners reached mutual scaffolding even though both learners were novice writers. This introduced the idea that scaffolding is not just "unidirectional". Likewise, Swain (2000) found that peers are able to support each other through a process of co-construction of meaning within the activity. Last, Ohta (2000) observed Japanese learners in a collaborative interaction. The study showed that the learners requested and provided help in a "predictable and developmentally sensitive manner". This finding implies that individuals have a natural inclination to provide the appropriate form of scaffolding in collaborative activities. The studies presented here have formed a starting point for investigating peer scaffolding as it relates to establishing the zone of proximal development in language learning.

Mediation and regulation

Whereas the discussion of scaffolding and the zone of proximal development highlights the collective actions learners, SCT research related to mediation and regulation in SLA has focused primarily on the mediational properties of language as it

relates to learning a second language. This strand of research has targeted private speech and inner speech, but it has also evolved to include cultural gestures.

Using a picture narration task of a monkey and hat seller, McCafferty (1992) investigates culturally diverse learners and their private speech. Data collected in this study shows that private speech increases with task difficulty and that private speech and the process of self-regulation varies cross-culturally in the narration task. Later, McCafferty (1998) used the same picture narration task, and he examined the relation between the use of private speech and L2 proficiency. The results show that low intermediates produced twice as many private speech forms as the advanced students. This provides evidence for applying Vygotsky's ideas regarding mediational function of egocentric speech to L2 learning. Similarly, de Guerrrero (1994) observed language learners to investigate inner speech. This study showed that many of the study's participants experienced inner speech in the L2. Also, L2 inner speech was vocalized and the structure depended on the language proficiency of the learners. Sensibly, as L2 proficiency increased the length and complexity of L2 inner speech increased also.

Building on these findings, Antón and DiCamilla (1998) examined social and cognitive functions of L1 use in collaborative speech of L2 learners in writing tasks. The study showed that the use of L1 in private speech was used as a tool to direct the learner's own thinking during a difficult task. DiCamilla and Antón (2004) also showed that private speech enabled the participants to concentrate on the task at crucial moments and to distance themselves from the problems they encountered. It helped them to gain control over the performance of the task. These studies of private speech demonstrate the

mediational properties of language, which learners use to exhibit self-regulation in their learning contexts.

Related more specifically to mediation, de Guerrero & Villamil (1994) analyzed interactions during peer revision in a L2 writing classroom. The results show that students displayed continuous access to self, other and object regulation. Thus, no individual is always self-regulated. This supports the notion of continuous access in which an individual may have a constant fluctuation between the levels of regulation.

Section Summary

As described SCT provides a basic framework for investigating and explaining human development as it occurs in the social environment through social interactions and the use of mediational tools, especially language. This research also highlights the importance of scaffolding in language learning, including collective scaffolding in collaborative interactions. Future research like the present study should expand on this further to include an examination of scaffolding, interactions, and the use of mediational tools in online environments. Furthermore, CALL research would benefit greatly by expanding the scope of mediational tool research to focus more on technology-based tools. The present study attempts to accomplish this by using SCT's fundamental concepts of mediation and regulation to transform the research process. They also serve as the foundation for the study's theoretical background Activity Theory.

Activity Theory

"Broadly defined, activity theory is a philosophical and cross-disciplinary framework for studying different forms of human practices as development processes, with both individual and social levels interlinked at the same time" (Kuuti, 1996). Simply put, Activity Theory (AT) provides a schema of conceptual and practical tools for describing human activity, which relates directly to both the actions of the individual and his or her surrounding environment. This description provides a brief introduction to Activity Theory as a means of analyzing human activity in its full context. It is this schema that will be applied in the present study to investigate the actions and developmental processes of online language learners.

This section of the literature review continues with a more in depth introduction to AT as developed primarily by Vygotsky, Leontev, and Engeström, but also including the work of countless other scholars. The discussion includes a historical and theoretical overview, a review of AT research in the field of Second Language Acquisition (SLA), and some concluding remarks on the implications of AT on this research project and future SLA research.

Comparing and Contrasting AT with SCT

Building on and diverging from SCT, AT has been conceptualized in and has continued to evolve through three distinct stages: the first relating to the work of Vygotsky (1978), the second relating primarily to the work of Leont'ev (1981) and Engeström (1987), and the third stage relating to the additional concept of interacting activity systems, which is a field still currently developing (Engeström, 2001). From a

historical perspective AT is considered a derivative of Vygotskyan Sociocultural Theory and it is attributed in large part to the foundational work of Lev Semyonovich Vygotsky and to two of his students, Alexander Romanovich Loria and Alexei Nikolaevich Leont'ev.

Specifically, Vygotsky (1978) introduced the idea of cultural tools in mediated action, which lead to changes in objects. Vygotsky's model for mediated action (ibid) demonstrates the principle that the human subject cannot act directly on the object. He or she needs the mediational tools to accomplish the feat. This concept, mediation, is considered to be the foundational principle for SCT and AT. Vygotsky proposed *word* or language as the unit of analysis for research related to mediation and cultural tools.

After Vygotsky died in 1934, one of his students, Leont'ev, expanded on the notion of mediation to develop activity theory by adopting *activity* as the unit of analysis. He argued that people perform *actions* that contribute towards the satisfaction of a particular need. In many cases these actions must be viewed in their social context to be completely understood. In this manner Leont'ev made a distinction between *activities*, which satisfy a need, and the *actions* that constitute the activities (Leont'ev, 1981). The second generation of activity theory derived its inspiration largely from Leont'ev's work. His commonly used example of the "primeval collective hunt" Leont'ev (ibid, p. 210-213) solidified the difference between individual actions and collective activity. This completed the shift from *word* as the unit of analysis to using *activity*, and it is also the principal difference between SCT and AT. Leont'ev's model for AT, depicted in Figure 2, emphasized the interaction of the individual and the object (ibid). This description

placed more value on investigating the entirety of the activity as opposed to isolating the individual's use of language.
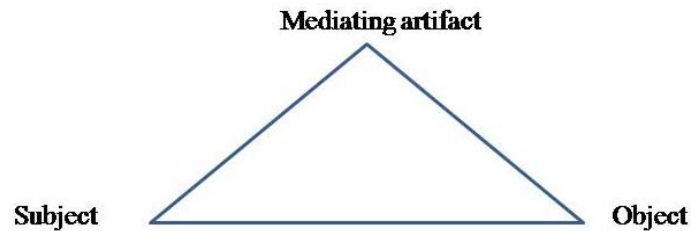
Figure 2. Updated graphic model for mediated action

Continuing with the second developmental stage of AT, Engeström (1987, p. 78) expanded the original conceptual framework of AT, as described by Vygotsky and Leont'ev, to include more attention on communities and rules. Engeström's widely used model of an activity, see Figure 3, inserts several new conceptual tools: *community*, *rules*, and *division of labor*.
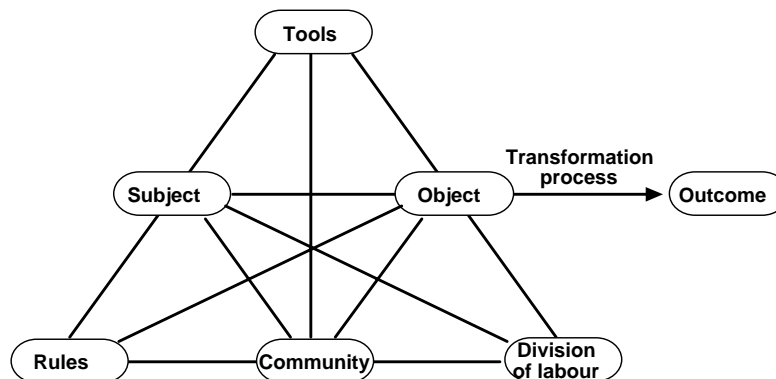
Figure 3. Engeström's (1987) model for an activity system

Within this AT model *community* refers to multiple individuals or groups who share the same object. *Rules* serve to mediate between the subject and his or her community, and *division of labor* serves to mediate between the object and the *community*. In this manner AT proposes that *activity* is carried out within a specific social context or environment, the *community*. Thus, the *community* and the *activity* are then governed by the *rules* and *division of labor*.

Engeström (2001) explains that in the third stage of AT the basic model for an activity system is expanded to include at least two interacting activity systems (See Figure 4). The two systems function in the same manner, however it is possible that they interact with each other and potentially share an object, such as completing a collaborative task. Engeström offers an example of a patient seeking medical attention to further explicate the idea of interacting systems. The patient seeks medical attention with the goal of getting help and ultimately feeling better (object). Once the patient has reached the doctor's office his or her activity system then begins to interact with the activity system of the doctor and his or her office. The patient's original object, seeking help and feeling better, then shifts to interact with the doctor and the staff. The new, shared object may become the collection of the patient's medical history. Engeström's concluding point is that "the object of activity is a moving target, not reducible to conscious short-term goals" (p. 135). This example also emphasizes the ability of two related activity systems to interact with potentially shared objects.
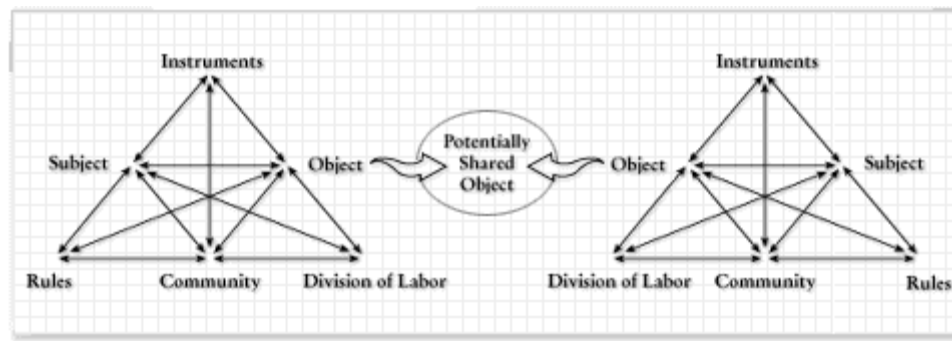
Figure 4. Engeström's model for interacting activity systems.

Theoretical Overview of AT

A theoretical discussion of AT must include a description of its five major components: the activity system as the unit of analysis, multi-voicedness, historicity, contradictions, and expansive cycles (Engeström, 2001). Describing these major components will offer a thorough explanation of how an activity system is formed and ultimately how it can be used to investigate learners' activities.

"The concept of activity…includes an intricate set of conceptual tools that help to interpret human behavior and cognition and make possible a differentiated theoretical analysis of social practice appropriate for both explaining and evoking human developmental processes" (Lantolf & Thorne, 2006, p. 209). Within this overall structure of the activity system the "conceptual tools" are the subject, instruments (tools and artifacts), object and outcomes, community, division of labor, and rules (Engeström, 1987, 2001; Engeström & Mittienen, 1999), as depicted in Figure 3.

The *subject* in many cases is the focus of the analysis within the context of the activity system. He or she may be one person or a group of people. The *object* is the subject's motivation for an achieving an *outcome* or result for an activity. "It is precisely

an activity's object that gives it a specific direction", or its object-orientedness (Leont'ev, 1981, p. 59). The object can be differentiated from a motive, which is the motivation for a specific action (Lantolf & Thorne, 2006, p. 218). *Instruments* are the tools used that mediate the activity and aid the subject in achieving the outcome. These tools can be cultural, mediational, or psychological. "The (reciprocal) relationship between the subject and the object of activity is mediated by a tool, into which the historical development of the relationship between subject and object thus far is condensed" (Kuuti, 1996, p. 27). A tool may be a physical object or a thinking tool. In this manner a mediational tool may be a physical computer or other instrument, or a mental plan of action.

AT further argues that subjects are grouped into communities, with rules mediating between *subject* and *community* and a *division of labor* mediating between *object* and *community*. *Community* consists of the participants in an activity that share the same object. This refers in part to what Engeström (2001) calls *multi-voicedness*. He explains that "an activity system is always a community of multiple points of view, traditions, and interests" (p. 136). A subject may be part of several communities and a community, itself, may be part of other communities, but multiple points of view are always present. Kuutti asserts that rules or regulational norms "cover both explicit and implicit norms, conventions, and social relations within a community: (1996, p. 28). These *rules* provide guidelines for what may and may not happen within an activity system. "Division of labor refers to the explicit and implicit organization of the community as related to the transformation process of the object into the outcome" (ibid,

p. 28). Later, this description of an activity system will be applied to the context of the present study.

The conceptual framework provided by AT can also be characterized as a hierarchical structure of activity. This hierarchy, as described by Leont'ev (1981, pp. 64-65), contains three levels: *activity*, *action*, and o*peration*. An *activity* is a system of human "doing" whereby a subject works on an object in order to obtain a desired outcome. The structure of an activity system was described previously. Briefly, under AT the unit of analysis can be defined as an *activity* aimed at achieving the object, which in turn motivates the completion of the *activity*. Thus, these activities can be further divided into *actions* which are geared towards achieving a specific goal, aimed at satisfying the overall object of the activity (Lantolf & Thorne, 2006, p. 218). Last, actions are considered to be the basic components that translate activities into reality. Actions are subordinated to the idea of achieving a result (Leont'ev, 1981, pp. 59-60).

As a result actions are performed consciously and they are implemented through automatic procedures called *operations*. Leont'ev describes an operation as "the result of the transformation of an action" (1981, p. 64). This implies that as the *action* was internalized by the subject, it became an automatic *operation*. Kuutti (1996, p. 31) portrays operations related to driving a manual-shifting car. In short, the automatized operations of driving a car may include breaking and accelerating, because they have become natural functions of driving and although they are intended to fulfill a purpose, they do not directly achieve the outcome of the activity.

Contradictions and transformations

Lantolf and Thorne (2006) describe activity as "a unit of analysis for understanding and illuminating the historical, mediated, and emergent qualities of human change" (p.233). With the end goal of describing changes, transformations or development, AT calls for investigating individuals within the context of their activity system. As such development proceeds as the subject or subjects resolve *contradictions*. Using the concept of contradictions for analyzing development in activity systems originated with Evald Il'enkov (1977) and his work with dialectics. More recently, Nardi (1996) offers the following explanation of contradictions:

> Activity theory uses the term *contradiction* to indicate a misfit within elements, between them, between different activities, or between different developmental phases of a single activity. Contradictions manifest themselves as problems, ruptures, breakdowns, clashes. Activity theory sees contradictions as sources of development; activities are virtually always in the process of working through contradictions (p. 34).

As such contradictions are tensions within or between activity systems. They are seen as sources of development; however, Engeström (2001) clarifies that they are not the same as problems or conflicts. He also explains that "activity systems take shape and get transformed over lengthy periods of time. Their problems and potentials can only be understood against their own history" (ibid, p. 136)**.** Last, it is this history of contradictions and resulting changes that lead to *transformation*:

An expansive transformation is accomplished when the object and motive of the

activity are reconceptualized to embrace a radically wider horizon of possibilities

than in the previous mode of the activity. A full cycle of expansive transformation

may be understood as a collective journey through the zone of proximal

development of the activity" (ibid, p. 137).

In the end it is the transformation or outcome of an activity system or interacting activity

systems which serves as a major focal point of analysis. The outcome is the end product

of the activity system, but it must be analyzed in the context of the activity system.

With this conceptualization of contradictions and transformation, four levels have

been established. Primary contradictions are those which occur in capitalist societies

between the use and exchange value of commodities. Secondary contradictions are

considered internal. They exist between elements of an activity system, and they occur as

a result of new elements entering the system. Tertiary contradictions occur when a

culturally more advanced object and motive are introduced into the activity. Last,

quaternary contradictions are considered external, and they emerge between a changing

activity and other connected activities ("Center for Activity Theory and Developmental

Work Research,").

AT Research in SLA

Although AT has been used in other fields of research including education and

work psychology, when used in SLA research, it aids in portraying the interplay between

the individual and the social aspects of language learning. This type of research opposed

isolating variables. Its main focus became the learner's context and distinguishing the learner's activity from the task presented in the learning environment.

The initial surge of AT research in SLA did not begin until the 1990's. At this time researchers began implementing the theoretical concepts of AT to further examine SLA processes. A series of studies were conducted that demonstrate how important context and defining the activity are in SLA research. Gillette (1994) conducted a longitudinal study, which examined effective and ineffective language learners through a student diary. By examining the learners' personal thoughts and how they position themselves strategically to complete an activity, the researcher concludes that although outcomes of a particular activity may be similar, the motives behind the activity are different. Thus, the learning outcomes are different also. This highlights a difference between the intended goals of a particular task and how that task actually takes place in the form of an activity, as defined by AT. Each individual learner brings different experiences, motives, etc. to the task; therefore, how the task is completed and its resulting outcomes will be viewed differently.

Coughlan and Duff (1994) and Roebuck (2000) also demonstrate the difference between task (blueprint to elicit linguistic behaviors) and activity (behavior that is produced in a task, process, and outcome in sociocultural context) in AT. First, Coughlan and Duff (1994) observed students in a narrative recall task. The researchers note that the actual recall narratives differ among the participants, and they conclude that this results in different activities, which may be due to individual learner differences. They also note that the participants co-construct the activity through their interactions. Secondly, the

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results of another text recall task, Roebuck (2000), similarly show that task does not

equal activity. The participants of this study repositioned themselves in a text recall task

according to their sociocultural backgrounds. Thus, this again demonstrates that

individuals will behave differently in the same task because they enter the task with

unique backgrounds, which ultimately frames their participation in completing the task.

Likewise, Lantolf and Pavlenko (2001) found that, cognitively, learners are not all

engaged in the same activity. They indicate that learners have different motives for taking

classes and learning languages. Some are fulfilling requirements, while others truly want

to gain the linguistic skills necessary to participate in communication. The researchers

attribute this to the learners' varying histories. These assertions are also important

because they further demonstrate that each student does not operate in the same manner.

In this manner, each individual's activity is framed by their experiences and histories, and

ultimately, this activity is what leads their learning and development in the completion of

any task. Collectively, the AT studies described her serve to highlight the importance of

tracking individual learning processes and development. Researchers and educational

professionals cannot assume that all learners will complete the same activity in a similar

manner. Doing so isolates the sociocultural and contextual make-up of the individual

learners.

Section Summary

As just described, AT provides a theoretical framework for investigating learning

processes. This framework is based chiefly on the activity system, which emphasizes

actions of the individual and the context of learning. The activity is also the primary unit

of analysis for AT research. Defining the system in language learning allows researchers to organize their descriptions more systematically. It also highlights the interplay between the individual and the social environment. Within AT research there is a focus on contradictions that occur in learning processes and how they are resolved. The resolution of contradictions is seen as the primary source of personal development (Lantolf & Thorne, 2006, p. 226).

AT informs this research process at all levels including the theoretical and empirical background, the data collection procedures, and most importantly the data analysis procedures. As such, this study will define online language learners' activity systems using the conceptual tools provided by AT. Special attention will be paid to the learners' use of mediational tools and their resolution of contradictions, which occur in their online learning.

AT Research in CALL

With a focus on defining activity systems and the social context in mind, AT researchers have begun to investigate language learning, which takes place with the use of computer-based technologies. This is an emerging strand of research, and like most AT research in SLA, studies with this focus have been conducted since the late 1990's. AT research in CALL aims to address how the students are learning with the mediational assistance provided by technology-based tools. Likewise, the present study aims to accomplish this specifically for online language learning. Taking this approach enables viewing the computer as a "tool" within the context of language learning. As an

integrated tool technology becomes an important part of language learning rather than a separate entity.

This reconceptualization of technology and language learning can expand the conceptual understanding of CALL and mediated learning. For example, in *Computers as Tools for Sociocollaborative Language Learning*, Meskill (1999) explains that computers work in conjunction with the task and the learners to create the learning environment. In this manner computers mediate the learning of the individual instead of being merely an electronic resource. Thus, the technology becomes a participant in the language learner's activity system. This assertion has become a constant theme in AT research conducted with CALL. Thorne (2003) explains that mediational artifacts, such as the computer, may help reveal dynamics of human activity, but they may also complicate the activity as well. In this case the computer becomes the object of the learner's actions. By reviewing research with this focus, it will become apparent that AT research in CALL has demonstrated how technology aids in establishing collaboration and self-regulation, but also, that it may serve as an additional source of tension in language learning.

One of the first studies to incorporate AT in CALL research was that of Thorne (1999). In this study, Thorne examined electronic discourse in French classes to highlight interactional patterns and social contexts. Specifically, he asked how personal histories affect computer-assisted classroom discussion (CACD). By observing 45 minute CACD sessions of university French II courses, he was able to define the students' activity systems via observation notes and chat transcriptions. Thorne found that the learners were relating their use of CACD to similar technologies used by the students when

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outside of class. This is to say that each student will rely on his or her past experiences with a particular technology to determine how best to utilize it in the foreign language context. He concludes by recommending that researchers understand CACD in institutional and social contexts, because the way the students conceptualize their use of CMC is directly related to their personal histories with these technologies.

Continuing with a focus on AT in CALL, Siekmann (2004) investigates how the computer as a mediational tool affects collaborative reading online. This case study research focused on mediational tool use in three collaborative web quests in a German foreign language class. It emphasizes that "learning is a process not an outcome" (p.67). Thus, the study attempted to look at how mediational tools are used to accomplish problem-solving tasks. The researcher intended to find out what mediational tools are used, how the students use them to regulate the activity, and how development occurs. Data collection involved interviews, a background questionnaire, a personal history interview, recordings of on-screen computer actions, and recordings of verbal interaction for six dyads. The researcher claims to use a microgentic case study design, which calls for the study of a naturalistic setting; however, the research procedures describe artificially placing the student dyads in the instructor's office for the sake of having access to the computer. This appears to be incongruent.

The results of this study indicated that computer management related to 31% of the off-task actions, indicating that internal tensions arose as the computer became a member of the activity system. Thus, the computer was a mediational tool used for furthering learning and development, and it was also a source of conflict in the activity

system. The researcher determines that the computer seems to change the learners'

activity. It caused technical problems that had to be resolved before continuing with the

task. Although the researcher identifies that the computer served as a source of conflict,

she does not describe how the learners were able or not able to resolve these tensions to

complete the task at hand.

Related to intercultural communication, Belz (2002) demonstrates how the role of

context and institutional setting in AT research of CALL may also cause unexpected

tensions with computer-based technologies. In a situated activity of transatlantic email

correspondence between 16 American students and 20 German students, Belz (ibid)

investigates the social dimensions that exist in telecollaborative foreign language study

with an emphasis on intercultural communication. Based on a technological survey,

interviews, participant observation, email and chat transcripts, and student-produced

course portfolios, Belz determines that there are incongruent histories for language

valuation, different status of the language in each country, and different levels of

proficiency. Furthermore, she adds that, "The differences in foreign language exposure

may have significant influence on learning expectations and perceived learning outcomes

in telecollaboration" (p. 66). She also identifies technological access and know-how as

having an effect on learner outcomes. This study serves to reinforce the role of social

factors, which play an important role in aiding or impeding learner processes with CALL.

Although Blin (2005) describes research similar to the studies just described, it is

one of the few studies conducted with AT in CALL that describes how contradictions or

tensions are actually resolved by the learners. This unpublished dissertation investigates

the role of CALL in aiding the development of learner autonomy in students that are taking French as a foreign language. The study uses AT as a conceptual framework with a focus on systemic tensions that occur as the activity unfolds in the process of online language learning. Data was collected via personal interviews, a review of student journals discussing their progress, their assignments, and a review of the course syllabi.

Blin found that CALL tools enable new learning practices and social autonomy, but they may also cause conflict in the form of lack of expertise. This form of tension hinders transformation, and if left unresolved, they will lead to prolonged frustration and prevent learner autonomy. Where other studies have neglected to describe the processes by which students resolve contradictions in CALL, Blin explains how the students propose new class rules and organization of division of labor to overcome conflicts in the course. He also explains that the less autonomous learners were fixated on original role of technology, and that the more autonomous learners were able to reallocate their uses and resolve contradictions. The author concludes that by allowing different paths to be taken to achieve a goal, learners become more independent. This independence is thus aided by the mediational properties of the technologies.

Section Summary

From the previous description of AT research in CALL, it can be seen that "technology is just a tool, but, like all tools, it mediates and transforms human activity" (Warschauer, 2005, p. 48). With this in mind, it is important to note that, "Human beings usually use computers not because they want to interact with them but because they want

to reach their goals beyond the situation of the "dialogue" with the computer"

(Kaptelinin, 1996, p. 49). This is the crux of AT research in CALL.

In addition to this basic contention, AT research discusses how tools may aid learning at some levels, yet cause tensions at other levels. A key component of the present research, which has not been addressed thoroughly in AT, is that it will attempt to describe how online language learners resolve contradictions or tensions as they confront them. The present study will also build on the idea of computers as a participant in a language learning activity by further defining its role in the activity system.

As just described, the bulk of AT research in CALL has related specifically to collaboration and collaborative activities. It is important to note that collaboration is not a primary focus of this research. This is based solely on the logistical constraints of the course. Although there is a course requirement related to collaborative activities, many students choose not to complete the exercises. In addition, student attrition is also a factor that impacts the viability of tracking student dyads throughout the course. Having said this, collaboration will be adopted as a secondary focus as it arises within the concepts described in the research questions including regulative behaviors, mediational tools, and the resolution of contradictions. In addition, whereas intercultural collaboration is an emerging strand of AT research in CALL, this study will not adopt this focus based on the heterogeneous make-up of the course.

Conclusion to the Literature Review

When considering the corpus of literature described here in the literature review, it is important to offer some concluding remarks to aid in synthesizing the major

assertions of this research. To do so, one must consider how the present study draws from existing literature, how it avoids the trends established, and how it attempts to fill in the gaps.

First, this study is intended to draw from the broader, socio-historical context of distance learning and especially online learning. From these fields the study gains working knowledge of the key concepts and the current online tools associated with online language learning. Aside from online language learning, the study draws strongly from AT and AT research. As such, AT will inform this research process at all levels. Specifically, it suggests focusing on the computer as a participant in the activity system and as a means of resolving contradictions.

Second, the study will attempt to avoid perceived trends in what has been published about online language learning. This means working with a clear definition of online language learning, which is viewed differently than blended learning and other forms of technology-enhanced courses. This also means avoiding an emphasis on CMC research, which is often a focal point in CALL research.

Third, the present research will attempt to distinguish itself from previous research, and it will attempt to fill in the perceived gaps that exist. These distinctions include a particular focus on contributing to research, not evaluation. As such, this research will consist of a strong theoretical framework and varied research methods, which do not rely too heavily on self-reported data. Combined, this will allow understanding online language learning in its full context. In context, the focus will be on actual learning processes and not the perceived benefits of online learning.

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Chapter Three Methods

As will be described in this chapter, the research methodology is directly linked to gathering the necessary data to answer the research questions. Drawing from the theoretical framework provided by SCT and AT, as described in chapter 2, the case study methodology was deemed most appropriate for this study. Combined, the case study approach and the theoretical framework provide a means of systematically investigating the complex processes involved in online language learning, including the use of mediational tools and the resolution of contradictions.

The purpose of this chapter is to provide specific details about the study design, the student participants and their social contexts, and the methods for data collection and data analysis. As the research questions were the driving force behind this study, the purpose was to examine how the actions of online foreign language learners transform into learning and personal development through the use of available tools. The study also attempted to explain how the final outcomes of the students' activities evolve from the learning processes involved in their online learning experiences, placing an emphasis on the learners' use of mediational tools, changes in activity systems, contradictions, and transformations. This information was addressed by a series of sub-questions, which will be explained here.

Research Questions

The focus of this study was to describe the nature of the transformational process which students underwent in the online language learning environment. The series of four questions with sub-questions will be described here:

1. How do the language learners' perceive their previous experiences with technology and language learning?

Question #1 focused on gathering information regarding the learners' past experiences. This focus was designed to depict the learners in their socio-historical context, and to see to what extent the learners' past experiences played a role in their present online language learning. Within AT socio-historical context is seen as playing a major role in shaping a person's present actions.

    a. What is the nature of the language learners' personal experiences with technology and language learning prior to taking the online Spanish course?

This sub-question to question #1 aimed to depict the learners' experiences through thick, narrative description. The intent was to describe the learners' background as fully as possible to establish each individual's starting point for online language learning.

    b. How do the students perceive the effects of their previous experiences on their current online language learning?

This sub-question to question #1 aimed to describe how the learners' perceived the potential effects of their previous exposure to language learning and technology. The goal of this question was to determine if the learners came into the online language learning experience with histories or skills that they perceived as being potentially beneficial or detrimental to their progress. This question also aided in establishing multi-voicedness in the research process by including the students' perspective.

2. What is the nature of the online language learners' activity systems?

Question #2 focused on defining the learners' activity systems as they were formed in the online language learning environment. To define these systems the research focused on identifying the components of each learner's activity system: subject, instruments, rules, community, division of labor, object, and outcome

      a. What is the nature of the online language learners' activity systems at the beginning of the course?

This sub-question to question #2 was designed to describe the components of the learners' activity systems. Specifically, this question sought to establish a beginning activity system as the learners began the course so that changes in the activity systems could later be compared to these originals.

      b. What changes, if any, occur in the learners' activity systems throughout the duration of the course?

This sub-question to question #2 was designed to define and describe any changes in the learners' activity systems as they progressed in the online language course. These changes were identified by comparing and contrasting the learners' activity systems at three points in the semester long course.

      3. What is the nature of the mediational tools used by the learners?

Question #3 focused on the mediational properties of the online tools available in the EN LÍNEA courseware environment. Within the framework provided by SCT and AT, all actions are mediated by tools whether they were psychological, such as language, or physical, as in the computer.

a. What types of mediational tools are used by the online language
learners?

This sub-question to question #3 aimed to describe the tools used by the online learners.
This included a focus on the tools intended function and the learners' adaptations to their
use in online language learning.

b. How are these tools used to enable online language learning?

This sub-question to question #3 aimed to describe how the use of a particular
mediational tool online aided the learners in attempting to control their learning process.
Within SCT this is referred to as regulation and it is considered to be essential in reaching
higher level thinking skills. The question was also intended to determine how the use of a
particular mediational tool aided the learners' progress towards reaching the learning
outcome desired.

4. What is the nature of the contradictions and disturbances that arise in
online language learning?

Question #4 focused on the tensions that the online language learners encountered.
Within AT contradictions and disturbances are viewed as essential to lead learning and
personal development.

a. What types of contradictions and disturbances arise in online
language learning?

This sub-question to question #4 was intended to determine what types of contradictions
occurred in the activity systems. By defining each learner's activity system and

describing the tensions as they occurred, it became evident how they related to the

components of the system.

> b. If possible, how are the learners able to resolve these
>
> contradictions as they occur?

This sub-question to question #4 was designed to describe whether the learners were able

to resolve the contradictions facing them in online language learning. If the learners were

able to resolve the tensions, this question sought to describe how this was accomplished.

In the event the learners were not able to resolve the contradiction, it was important to

note whether they were able to progress in their overall activity.

Case Study Research

The researcher and this study assumed the epistemological viewpoint that

knowledge is socially constructed, and that knowledge mainly exists in relation to one's

cultural and social environment. In this manner knowledge is constructed and it depends

greatly on one's perception and social experiences. To gather the necessary data to depict

the students' online language learning experiences, or formation of knowledge through

their social experiences, the research paradigm for this study was qualitative, utilizing the

case study method.

The qualitative paradigm was chosen for this research for two principal reasons.

First, this form of qualitative research is intended to preserve the context of the

participants, which was essential for the primary purpose of this study. Second, the case

study approach was suitable for this research because it is intended to form an in-depth

understanding of the case being investigated. Yin (2003) states that a case study

"investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (p. 13). Observing the participants in a situated social context was essential for this research. In this study the researcher attempted to describe the case, analyze the themes present in the description, and ultimately make some interpretations from the data. This process allowed the researcher to depict the process of online language learning. The case study approach was suitable for thoroughly examining the tool-mediated, goal-oriented activity of several learners as they developed skills with technology and the language being studied, because it allowed for viewing the learners from a broader perspective as opposed to artificially isolating and controlling them individually. For a more detailed definition of a case study, consider the following explanation:

> The basic idea is that one case (or perhaps a small number of cases) will be studied in detail, using whatever methods seem appropriate. While there may be a variety of specific purposes and research questions, the general objective is to develop as full an understanding of that case as possible (Punch, 1998, p. 150).

In this particular study, the appropriate methods were varied, including a background survey, a series of interviews and observations, a review of supplementary materials, and a researcher journal. By incorporating data from these multiple sources, the object was to reach a "full" understanding of the learners' mental and social processes involved with learning language in an online environment. In this manner the learner(s) was the case under examination. Gillham (2000) describes a case as "a unit of human activity embedded in the real world; which can only be studied or understood in context; which

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exists in the here and now; that merges in with its context so that precise boundaries are difficult to draw" (p. 1). Therefore, to reach the "full" understanding of the case, it was imperative to consider the individuals as well as the social environment that contained their actions. Rightfully so it was the combination of the cases and their social context that created the particular "uniqueness of the cases examined". By capturing this "uniqueness" (Stake, 1995) the researcher expected to gain valuable insight to aid in answering the research questions.

Activity Theoretical Case Study

The purpose of this section is to link the activity theoretical perspective with the qualitative method, specifically with the case study methodology. I will attempt to demonstrate that the theoretical framework provided by SCT and AT is congruent with and appropriate for the research framework provided by the case study approach. These congruencies contribute to the justification of this study to employ an activity theoretical case study.

Within AT research, such as this study, the unit of analysis is the activity system comprised of the subject, object, rules, community, instruments, division of labor, and the outcome. For this research the activity system refers to that of each student participant in the online language course. Each student participant was the primary actor of at least one activity system and potentially one or more interacting activity systems. Kaptelinin (1996, p. 58) explains how computer-based activity can be analyzed with Activity Theory, "finding the motive, goals, and conditions of the activity; identifying structural components of the subject's interaction with reality (individual activities, actions, and

operations) as well as tools mediating activity; and tracing developmental changes of the activity." This explanation briefly discusses the role of the structural components as defined in AT; however, Lantolf and Thorne (2006) highlight the importance of viewing the activity systems as a whole:

"It's critical to acknowledge that it is not, per se, the individual elements of the system (subject, object, rules, community, etc.) that help analysts account for human functioning and development; rather it is the relations between these elements that form the analysis and support intervention and transformation. These relationships are really processes—operations and actions that occur in and across time periods" (p. 225).

The purpose of investigating the learners of this study and their use of mediational tools is to examine them as they interact. For this purpose of this study, the researcher will attempt to portray the learners' activity systems by describing their learning phenomenon within the conceptual framework provided by AT. Although this process in itself can potentially alter the events, this research has deemed this appropriate. Even though the parts of the activity system may be described individually at times, as always within AT it is necessary to remember that these parts do not exist without their full context.

"Language learning is a multifaceted social and cultural phenomenon, even more so when it involves new technologies that promote a variety of social interactions" (Kern & Warschauer, 2000). This holds especially true when considering foreign language learning in Internet-based environments. Adopting this line of thinking, the theoretical

background for this study comes from Vygotskian SCT and AT. Utilizing this approach

provided a framework for critically viewing and understanding the cases which were

being examined in the study. It serves as a basis for how to organize what is unknown

about the behaviors observed and it also suggests concepts that can be applied to

analyzing the case (Silverman, 2000).

The use of AT and SCT has led to several significant contributions in the field of

SLA including an increased focus on the individual's environment, or context, and its

role in learning processes. Specifically, AT relates directly to the structure of an activity,

mediation, interaction method, and internalization. It focuses on tools and objects of labor

in the development of human consciousness. The activity is considered to be doing

something that is motivated by a biological or cultural need. The motives of these needs

are realized in goal-directed actions, spatial and temporal conditions (operations) and

mediational means (Wertsch, 1985). Nardi (1996, p. 76) explains that "the activity itself

is the context", and it is this context which will be under examination in the present

study. Nardi also outlines several methodological implications of Activity Theory:

> 1. *A research time frame long enough to understand users' objects*, including,
> where appropriate changes in objects of time and their relation to the object of
> others in the setting studied.
> 2. *Attention to broad patterns of activity* rather than narrow episodic fragments
> that fail to reveal the overall direction and import of an activity.

3. *The use of a varied set of data collection techniques* including interviews, observations, video, and historical materials, without undue reliance on any one method.

4. *A commitment to understanding things from users' points of view* (pp. 94-95). These implications served as a major driving force behind the methodological organization of this study, and they integrated well to case study method. By combining elements of case study research with Activity Theory, it allowed this research to evolve as a longitudinal process. This research took place over a 17 week semester. Because of this time period, the research was able to focus on learning as a process of gradual transformation, not merely an isolated outcome. In addition, the length of the study provided the opportunity to integrate several methods of data collection, including data which focused on investigating the students' perspective of their learning.

Applying the Theoretical Framework to the Present Study

To continue to put the conceptual framework of AT into the context of this research, I would like to further define the potential activity systems for online language learners in this research context based on the data collected in the pilot study and several general assumptions about online learning. This model attempts to transform the understanding of online language learning from an activity theoretical framework including two important concepts, mediated-action and cultural tools. Thus, viewing and understanding language learning becomes a different activity when it takes place primarily online via computer-based technologies and the Internet. For the purpose of this research, AT was applied to an educational context in which collegiate students were

taking an online Spanish course. Figure 5 depicts the components of the activity system:

subject, instruments, object, division of labor, rules, and outcome. In addition, Figure 5

attempts to define these components in the context of online language learning by

combining the data collected from the two participants in the pilot study and several

hypothetical assumptions. However, in the actual study this information came directly

from interactions with and observations of the student cases under examination.
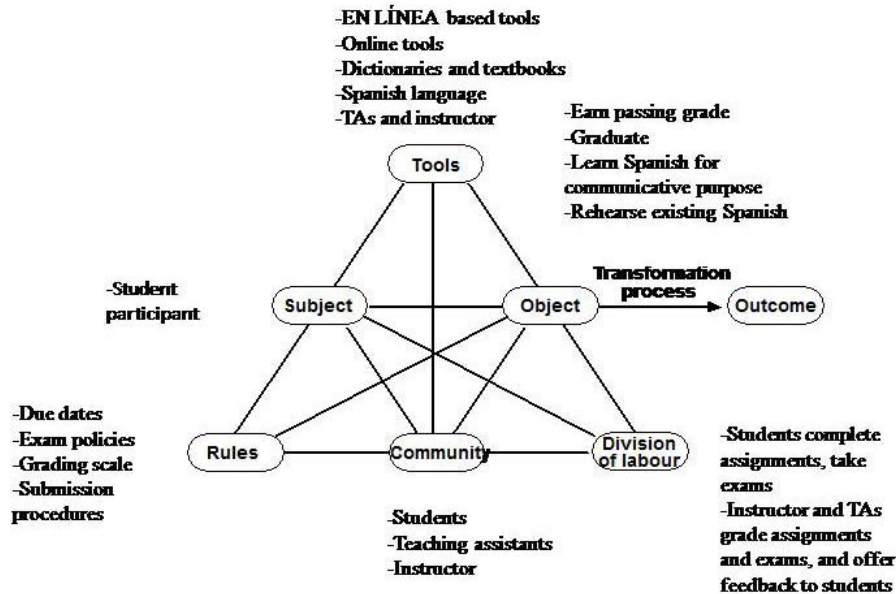
Figure 5. Possible activity system for an online language learner

First, the activity system under investigation in this research is that of online

language learning, and the subject is the individual online language learner. Second, the

activity of online language learning is mediated by tools and artifacts that are available to

the student including language and, in the context of this study in particular, online,

technology-based tools. Third, the learner's actions are directed towards a goal. For example, students enrolled in a beginning level foreign language course may be motivated by graduation, passing the course, maintaining a certain grade point average, or learning the language for personal, communicative use. Likewise, the learner's actions are also mediated by the student's participation in communities including that of the university, of the online course, of his or her home, etc. Fourth, within these communities, especially those of the university and the class, there are particular guidelines, including what AT calls the rules and the division of labor. These rules generally dictate how student work should be completed and submitted, due dates, and procedures for exams and assigning grades. Similarly, the division of labor includes who is responsible for what in the activity. In an online language learning course, generally the students are responsible for completing assignments and taking exams, while the teaching assistants and the instructor are responsible for grading assignments and exams and offering feedback to the students.

Role of the Researcher

It is important to note that as the primary researcher in this study I also served as the main instructor for the online course under examination. Because of my role as the instructor I came into the study with existing relationships with the university, supervising officials of the department, and the course materials. These relationships facilitated the study by providing ease of access and a familiarity with the inner workings of the department and the Spanish distance learning program.

It is also essential that, as the researcher, I was able to recognize and disclose how my previous experiences in the distance learning program influenced me with regards to *a priori* beliefs throughout this research project. Having said this, these particular beliefs and experiences are what initiated and led this study throughout. In addition to beginning with *a priori* beliefs, as the instructor and the researcher, I was axiomatically in role conflict, because ultimately I played a role in shaping the conditions under which the students participated in the research process and the online course. Thus, I attempted to minimize any undue pressure on the student participants by establishing comfortable relationships and acknowledging my role in data collection and analysis. Morse and Richards (2002) refer to this as awareness of self.

Throughout this research process I felt it was important to recognize my role in creating and interpreting data; however, it was equally important to disclose this role throughout the research process. As the researcher I served as the facilitator of the study, the data collector, and an observing participant. Where appropriate in this manuscript I have attempted to describe my specific role in collecting, analyzing, and creating the data. In qualitative research it is common for the researcher to serve simultaneously as the primary instrument for data collection (Lincoln & Guba, 1985). Some have criticized the role of the researcher in qualitative research as being too involved and thus contaminating the research. In response to this argument, Smagorinsky (1995) discusses the inappropriateness of the "purity of data" metaphor commonly cited in empirical research. He states that "our effort should not be to avoid participating in the construction of data, but to recognize and account for the ways in which we inevitably contribute to

the shape our data take" (p. 208). He goes on to explain that "data are social constructs developed through the relationship of researcher, research participants, research context (including its historical antecedents), and the means of data collection" (ibid). Wertsch (1998) provides a classic example of how data are socially constructed. He explains how three individuals formed different impressions of an elephant. One would think that each person would have the same interpretation.

> As in the case with the three blind men with different images of the elephant, none of these ideas about human nature is simply or completely false. Instead, each provides a partial picture, but one that remains unconnected with others. Furthermore, and more problematic in the long run, each provides an image of human nature that seems to be incommensurable and hence not just unconnected but unconnectable with the others. The story of the three blind men ends with each insisting that his was the true account of the elephant. In the social sciences, there is a tendency for each of many traditions to argue that its idea of human nature is the true one. In all instances, this contributes to the predicament of having no way to connect the various partial images together into a more complete and adequate account. (p. 4)

This view of knowledge demonstrates how knowledge is constructed based on individuals' social experiences. This argument is relevant for education research as a whole, and also for this research project. It was my intention to portray the participants and their learning contexts as I came to know them through my interactions with the learners. In this manner I participated in the act of "making data" as a collaborative process of negotiation between the researcher and the participants (Morse & Richards,

2002, p. 87). Likewise, when presenting the findings I attempted to portray the data utilizing the participants' own words as much as possible, thus minimizing my voice. This allows readers to see my interpretations presented in this manuscript; however, it also allows them the opportunity to form their own judgments.

Last, in true Vygotskian fashion I used Activity Theory and Sociocultural Theory as I had come to understand them through personal use of mediational tools such as courses taken, books, journals and articles, conversations with peers and professors, etc. These experiences combined with the processes related to the study itself allowed me to participate in the "social practice of knowledge construction" (Smagorinsky, 1995), which was required of me for the completion of this research project.

A Description of the Setting

The setting of this study was the Modern Languages Department at a large, southeastern university. The World Language Education Department at the University of South Florida originated in 1965 when the university was founded. Its "mission includes providing language instruction to the community as well as undergraduate and graduate students attending the university." The department philosophy was to teach using the communicative approach to language learning. Spanish is the predominant language taught by the department, French is the second most commonly taught language, and other languages taught include: Italian, German, Arabic, Russian, Portuguese, Chinese, Japanese, and others as available. The vast majority of the language courses were taught in traditional, classroom settings. The first exception to this was the adoption of the *Destinos* program in 1993.

Destinos is a video-based, beginning Spanish program distributed by McGraw-Hill. It is based on 26 hours of a video drama series that utilizes interactive dialogue in the Spanish-speaking world. This was the first distance learning program for language instruction to be used by the university. At the university the program consisted of a *telenovela* video series accompanied by written homework that was submitted in person or via fax. The *Destinos* courses were taught primarily at a distance. As the program evolved, it became a sort of blended learning program with optional face-to-face reviews. In Fall 2005, after a presentation by Vista Higher Learning, the department adopted the EN LÍNEA courseware to replace *Destinos* as the means of providing Spanish courses at a distance. EN LÍNEA was first trialed with a section of 25 students to ensure that the online courseware would be an appropriate choice for the department's overall goals of offering distance learning and reducing department costs. It is currently the only web-based distance learning opportunity at the university for foreign language students. Typical class sizes for these Spanish courses are 150 to 200 students.

A Description of the Participants

The specific population for this research contained approximately 250 online, foreign language students per semester with Spanish I and Spanish II combined. For the two classes there was one main instructor and two teaching assistants who assisted with the grading and proctoring of exams. The instructor was ultimately the person responsible for carrying out the course, including assigning the students' final grades. The researcher, also the instructor for the online courses, had been teaching Spanish for nine years and he

had been the Spanish distance learning coordinator and the lead instructor for the online courses for three years or nine semesters.

The student participants for this study were seven college level foreign language students that were participating in the online, introductory Spanish course at the university. Typical classes in the past had consisted of somewhat heterogeneous student makeup. Most students began with little to no background in Spanish. Those with experience had a two years in high school. From my personal experiences with the course, the vast majority of the students take Spanish to fulfill their foreign language requirement, which requires that the students earn a C or better in a level two language course. Few students take the introductory Spanish courses unless it is a required course for their degree. Generally these non-requirement students intend to major in Spanish or they want to learn the language for personal, communicative reasons. The majority of the students are Caucasians in their 20s; however, there are usually several African-American students and other minority groups are represented sparingly. Typically there is a balance of males and females. It is also important to note that a sub-section of the students consists of middle-aged, working adults who take the online courses for convenience of scheduling.

Organization of the Course

This study examined the students while they were participating in an online Spanish course. It is important to mention that the course forms a bounded context that lends itself to examination as a discrete item. This online Spanish I course was offered via the web using an online courseware called EN LÍNEA, which will be described later

in more depth. The course was open to beginners and students with little or no background in Spanish, who sought to improve their knowledge of the language and culture. The course was not available to native or near-native speakers. Before students were permitted to register for the online courses they were alerted that the course would require self-discipline and commitment, and they were encouraged to assume the responsibility of tracking their learning and progress throughout the course. In this manner the students were required to check EN LÍNEA, USF email, and Blackboard (an online course management system utilized by the university) to stay abreast of the course material and any possible changes. The students were also encouraged to take advantage of the instructor's office hours for help. The course used the following textbook: *Vistas: Introducción a la lengua española.* (Second Edition) by José A. Blanco and Philip Redwine Donley. The textbook accompanied an online book code, which granted the students access to EN LÍNEA. The students could not participate in the course without the online access code.

Before registering for the course all the students solicited an instructor permit, which allowed them to register. To receive this permit the students completed a background questionnaire that was designed to collect information regarding the students' linguistic and technological experiences. Permit solicitation and the registration process took place at the end of the previous semester and continued through the first week of the new semester. After the registration process the course began with a mandatory orientation, which took place face-to-face at the university. In this session the instructor presented an overview of the course, its requirements, policies, and procedures,

and how to operate and navigate EN LÍNEA. Aside from the initial orientation, there were four optional review sessions, and four required examinations that also took place face-to-face. The reviews were offered on Wednesday evenings and the exams were offered twice in the same week to allow for some flexibility, Thursday evening and Saturday morning. A detailed schedule was provided at the orientation session and it was available in Blackboard throughout the course. Table 3 provides a brief overview of this course schedule. The exams were based on the linguistic content and weekly homework activities from the EN LÍNEA courseware. They included sections that cover vocabulary, writing short responses, verb conjugation, cultural information, question and answers, etc.

Table 3

Overview of course schedule

Week	Monday	Tuesday	Wednesday	Saturday
1	Course begins on Monday			Mandatory orientation
2				
3	Lesson #1 due			
4	Lesson #2 due	Exam Review #1	Exam #1	Exam #1
5				
6	Lesson #3 due			
7	Lesson #4 due	Exam Review #2	Exam #2	Exam #2
8				
9	Lesson #5 due			
10	Lesson #6 due			
11		Exam Review #3	Exam #3	Exam #3
12				
13	Lesson #7 due			
14	Lesson #8 due			
15	Lesson #9 due			
16		Exam Review #4	Exam #4	Exam #4
17				

The optional review sessions were offered to help students with preparing for exams and answering their individual questions. Students that could not attend the review sessions were encouraged to call the instructor during office hours or send an email requesting help. In addition, exam review outlines were posted electronically in Blackboard, which highlighted specific material covered on the exams. The students always had the option of coming to the instructor's office for assistance or individual tutoring. The students were advised that they should anticipate spending an average of 10-20 hours a week completing their homework online. For each lesson's assignments the students had two attempts to submit the exercises. The second attempt was

automatically graded regardless of the score. For more information regarding the structure of the course a copy of the syllabus is provided in Appendix A.

A Description of the Online Courseware "EN LÍNEA"

EN LÍNEA is the product of a joint effort between Vista Higher Learning and Quia.com. According to the publisher's website, it is "a complete standalone online introductory Spanish course, specially designed for online courses and distance learning applications." The course is intended for beginning Spanish students with little or no experience, but it could also serve as an elementary review for heritage Spanish speakers. The online course access (EN LÍNEA – VHL Spanish eCourse) can be accompanied by a hard copy of the textbook (VISTAS 2e Student Edition). The necessary online access code is priced reasonably, comparable if not cheaper than a regular textbook package. Students can purchase the materials directly from the publisher, (http://www.vistahigherlearning.com/) or in many cases from their institution's bookstore. The online access codes are valid for 18 months, which is generally sufficient for students to complete Spanish I and II with the same code if they enroll for the courses consecutively.

As minimum requirements students need a computer and internet access to operate EN LÍNEA. Broadband or high-speed Internet service is recommended for optimal operation and navigation of the online courseware. EN LÍNEA is designed to function best with Microsoft Windows and the most recent version of Internet Explorer. Vista Higher Learning does offer technical support directly to both students and instructors. This support is provided via email (enlinea@vistahigherlearning.com) and

phone at Vista Higher Learning Tech Support (800) 248-2813. Through personal use, it should be noted that EN LÍNEA students do solicit a variety of technical explanations specifically related to the courseware. Although the publisher provides technical support, out of convenience to both the instructor and the students the instructor should be technology literate as well. Last, in addition to the aforementioned basic requirements, there are several slightly more advanced technical requirements including playing and recording sound capabilities and several required plug-ins: Shockwave, Flash Player, and Adobe Acrobat. For more information regarding the technical requirements for EN LÍNEA please refer to the Vistas Higher Learning document provided in Appendix B.

The online courseware is divided into 18 *Lecciones* and the sections of each lesson remain constant (See Figure 6): *Contextos*, *Fotonovela*, *Pronunciación*, *Estructura* (Grammar), *Adelante* (Reading, Writing, and Listening Practice), *Panorama* (Culture), *Vocabulario*, and *Prueba* (Testing). This structure can be seen in Figure 6. In addition, Appendix C is an outline of the lesson one materials included in EN LÍNEA. It is meant to provide a general idea of the types of tasks that are performed in each lesson.

Figure 6. Overview of lesson in EN LÍNEA

The consistency of structure for each lesson enables the students to better navigate the courseware while fulfilling the objectives of the course. The activities within each *Lección* address listening, speaking, reading, and writing skills through a variety of formats including: fill in the blanks, audio recording, simulations, games, cultural and linguistic videos, authentic materials, etc. Throughout the lessons the students receive authentic audio and video footage. In addition, culture is both explicitly addressed in the *Panorama* section and implicitly addressed throughout each *Lección*.

Vista Higher Learning claims that EN LÍNEA "delivers classroom-proven content and pedagogy in a ground-breaking, highly interactive online environment." The first part of this statement is based on the sales success for VISTAS, Second Edition, on which EN LÍNEA is based. It could be argued that popularity and profitable sales are not accurate measures of effective content and pedagogy. However, it appears that VISTAS does offer some sound content and pedagogy based on the fact that education professionals have continued to select the text for their courses. As time passes and research is conducted with EN LÍNEA, we will be able to tell if this preference is based solely on the novelty factor created by a unique online courseware. In terms of providing "a ground-breaking, highly interactive online environment", this appears to be an accurate description. EN LÍNEA is an online courseware product for Spanish that is currently not matched by any other publisher. I conducted a search of major research journals and major publisher websites, and I could not find another online courseware which allowed for the majority of interactions to take place online. The company's claim to be "highly interactive" as

opposed to interactive may be a point of contention for some, but the program does offer

several avenues for student-student, student-instructor, and student-computer interactions.

The potential student-student and student-instructor interactions are based on

computer-mediated communication functions including tools for synchronous and

asynchronous audio-based (See Figure 7) and text-based chat. Through these tools EN

LÍNEA enables partner activities in which the students record and submit communicative

activities together. The courseware also provides opportunities for learners to record

other exercises individually and for the instructor to record feedback for each student.
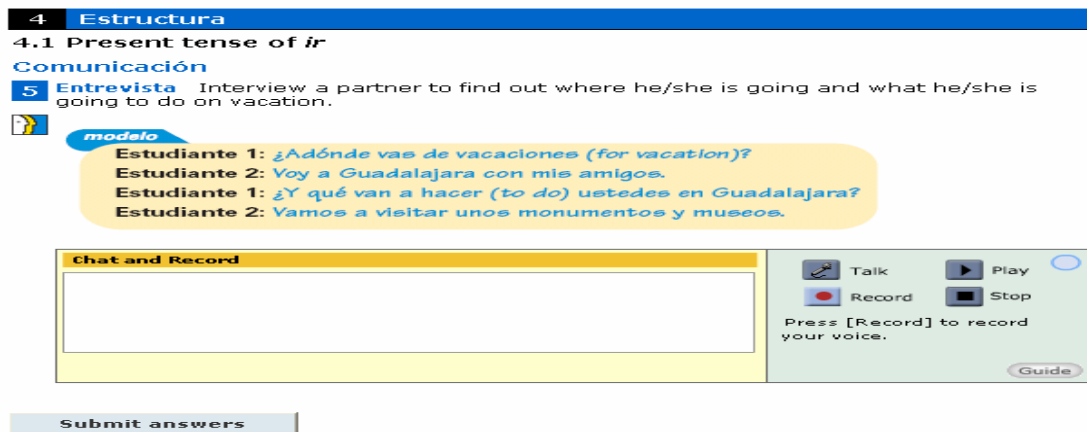
Figure 7. Audio-recording tool in EN LÍNEA.

Other tools that provide opportunities for student-computer interactions include

electronic resources such as World Wide Web links, an Electronic Verb Wheel, and an

Electronic Dictionary. Last, one of the more interesting student-computer interactions is

created through *Tutorials*, which take the form of animated instruction. Here *Profesor*

Pedro Gómez Laserna, a cartoon character, walks the students through each point of

instruction for grammar and vocabulary (See Figure 8).

Through personal use it is apparent that EN LÍNEA is well organized, and the continuity of its layout makes the courseware navigation easy to handle. The courseware is highly functional and the site experiences minimal downtime, if any. In terms of instructor benefits, the overriding factor has to be the courseware's ability to manage a high number of students, multiple courses, separate classes within courses, and a large amount of content material. The course management tools allow instructors to access individual assignments for separate students, review their work, assign grades, and provide individualized feedback (text or audio) with the click of a button. In addition, automatic grading is available for online assignments that do not require instructor review.
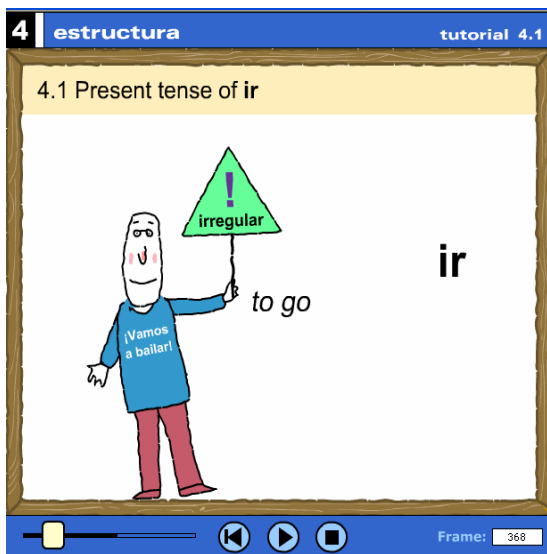
Figure 8. Animated tutorial.

From the learners' perspective the most prominent benefit of EN LÍNEA is the ability to access the materials at any time and any place. This freedom gives the students

finger tip access to multiple resources and authentic language sources. Moreover, the students are able to receive immediate computer-generated feedback for most activities and they can access their grades through EN LÍNEA at any time. It is important to note that the EN LÍNEA courseware does require high levels of learner autonomy, self-efficacy, and self-regulation. Thus, learners must be intrinsically motivated and able to follow along with the online instruction and complete the required activities with minimal assistance depending on the format of course, distance learning versus blending learning, size, and proximity.

Participant Selection

Prospective participants for this study were identified using purposive sampling in which the subjects were selected because of particular characteristics indicated in their background survey. This study also integrated convenience and criterion sampling methods (Patton, 1990). First and foremost, the students were selected to maximize their availability and accessibility (Stake, 1995). This type of convenience sampling allowed the researcher to save time and effort in making contact with the participants on a regular basis. Although convenience sampling may not be the most credible form of sampling, it was an essential part of this research for logistical and practical reasons. If the prospective participants did not appear to be accessible, they were ruled out at the onset of their background survey review.

Beyond availability and accessibility, each participant had to demonstrate two of the three following characteristics: a unique social context, a unique linguistic experience, or a unique technological experience. Again, this form of criterion sampling

was used to select participants according to the information gathered by the background survey. For sampling purposes, *unique* was used to refer to specific experiences that are not typical of the average college student. It is understood that these students entered the course with distinct social contexts. Of particular interest to this study were students who were working full time in addition to taking university courses. It was also understood that the students would enter with varying levels of technological and language skills and university experiences. For the purposes of this study, the researcher attempted to recruit participants with previous language learning experience, whether it is with Spanish or another language. Table 4 is a graphic representation for the participant selection process.

This form of participant selection was consistent with the theoretical framework provided by AT and the general framework of case study research. More importantly, this form of purposive sampling was essential to answer the study's research questions, because it provided a method for selecting meaningful cases to extract rich and meaningful data. In the event that a potential participant was unwilling to participate, the researcher contacted another student.

As a result of the participant selection process, data was collected in regards to seven students that were enrolled in an online Spanish course for beginners. Seven cases provided an adequate opportunity to research and portray several unique cases. In this manner the researcher selected the cases for this study so that the potential for meaningful data can be maximized. It was understood that these students entered the courses with varying levels of technological and language skills and university experiences. Seven students were selected because it was felt that this number of participants would provide

an adequate opportunity to investigate multiple backgrounds and distinct cases and still

produce a manageable amount of data considering the time frame and scope of this

research project. Participants signed informed consent before beginning their

participation. Likewise, the researcher contacted the department chair for permission to

conduct the research, and all Institutional Review Board requirements were satisfied.

Table 4

Participant selection matrix

Participant name	Characteristic present in participant	Accessibility	Unique social context	Unique linguistic experience	Unique technological experience
	Yes No				

Procedures for Data Collection

For this case study data were collected throughout the 17 week spring semester of

2008. At the beginning of the semester informed consent was obtained from the students

who wished to participate in the study. The data were collected through an initial

background survey, a series of three interviews, three observations, a researcher journal,

and a review of the course materials to gather the data needed to answer the research

questions. As several case study researchers have stated (Gillham, 2000; Stake, 1995;

Yin, 2003), it is very important to have multiple sources of evidence in case study

research. In this manner a combination of data sources provide a clearer description of

the cases being examined.

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The background survey, administered during the registration process, gathered information for the purpose of selecting participants and it also served as a starting point for the series of interviews and observations. The personal history interview was conducted individually with the participants, starting the second week of the semester. After the personal history interview a series of three observations and three interviews were conducted to gather information regarding the learners' online experiences. The researcher journal and the review of course materials took place throughout and after the duration of the course. An overview of the data collection timeline is depicted in Table 5.

Table 5

Overview of data collection procedures for Spring 2008

Week	Course schedule	Data collection schedule
1	Mandatory orientation	Background survey
2		
3	Lesson #1 due	
4	Lesson #2 due, Exam #1	
5		Participant selection and Personal history interviews
6	Lesson #3 due	
7	Lesson #4 due, Exam #2	Observation #1
8		Interview #1
9	Lesson #5 due	
10	Lesson #6 due	
11	Exam #3	Observation #2
12		Interview #2
13	Lesson #7 due	
14	Lesson #8 due	Observation #3
15	Lesson #9 due	Interview #3
16	Exam #4	
17		Finish any uncompleted interviews and observations

It is important to note that the study posed no serious ethical problems or detrimental effects to the participants. As the researcher I took measures to minimize the possible effect of my own authority and biases throughout the study. To accomplish this all student participants' homework and exams were graded by one of the TAs and not by the main instructor who was also the primary researcher for this study. In addition, student participation in the study was completely voluntary and the participants were free to withdraw from the study at any time throughout the semester without repercussions in the course. Furthermore, the information collected was not revealed to other parties, and all published materials will not be linked with the individuals' names. The students' identities have been kept anonymous at all times throughout the research process.

Instruments

As indicated the participants of this study were seven foreign language students of an online Spanish course at the University of South Florida. The research was conducted as a case study, which employed an initial background survey, interviews, observations, a researcher journal, and a review of supplementary course materials. These provided insight to the learners' transformations involved in the processes related to their online language learning. See Table 6 for an overview of the instruments and their method of data collection and data collected. Throughout the data collection process the researcher served as the primary instrument. Eisner (1998) refers to this as the "self as an instrument" in qualitative research. However, data was also collected by student self-reporting and the videotaping and observations of the students' online learning in EN

LÍNEA. In the subsequent sections there is a more in depth description of the individual

instruments implemented by the researcher.

Table 6

Overview of research instruments

Instrument	Method of data collection	Data collected
Background survey	Paper and pencil survey	Demographic information Personal experiences
Personal interview	Digital audio recording Interview transcripts	Student reported information and clarification of personal experiences
Researcher observation	Video recording Video transcripts Event log	Use of mediational tools, regulative behaviors, contradictions and disturbances
Review of supplementary course materials	Paper and electronic documents	View of community, rules, and division of labor
Researcher journal	Paper and electronic documents	View of community, rules, and division of labor Researcher's thoughts

Background Survey

The initial background survey was completed by the students during the

registration process, and the researcher saved an electronic copy of each survey for future

use. The survey was presented electronically via the language department's web site.

Each student wishing to enroll in the online Spanish courses was required to submit a

completed survey. The survey used for the permit process was developed by the department to gather personal information about the students to determine if they are well-suited to take the online Spanish course.

The survey was geared towards collecting specific demographic information, personal experiences with language and technology, and other relevant themes related to learners' use and knowledge of technology and university courses. The background survey is available in Appendix D. It gathered information regarding the flexibility of the students' schedules, the primary location in which the student completed online course materials, and other information concerning their time constraints in the course. This data was intended to help in answering research question #1, what is the nature of the language learners' personal experiences with technology and language learning prior to taking the online Spanish course? This information also aided the researcher in selecting the most flexible and accessible cases for investigation and in recruiting unique cases to ensure adequate participant diversity. For participant selection it was important that the student participants' schedules coincided with that of the primary researcher. Of the students who filled out the survey seven were selected to participate in the remainder of the research process.

Interviews

Building on the information collected by the background survey, interviews were conducted to gather data from the students' point of view. According to Stake interviewing allows discovery and portraying multiple realities (1995). These multiple realities aided in avoiding researcher bias and in clarifying aspects of the data analysis

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phase. In addition, they assisted in establishing *multivoicedness* and *historicity* (Engeström, 2001) as conceptualized within AT. In this manner it was essential that this research investigated the cultural and historical context of each participant including their personal experiences with language learning, technology, and other university encounters.

Interviews in this study were open-ended and semi-structured in nature (Rubin & Rubin, 2005). The researcher was structured enough to lead the interview by preparing a set of questions beforehand; however, he also provided ample opportunity for the participants to discuss their unrestricted thoughts and feelings. In this manner the researcher was also able to pose spontaneous follow-up questions as were deemed appropriate in the natural flow of the interview. Each student received the same set of questions initially, however further questions varied according to the nature of the observations and the participants' responses in the interviews. The researcher attempted to establish a bond with the participants that would encourage openness throughout the interviews. Interviews lasted 45 to 60 minutes depending on the overall pace and outcomes of the interview process. Three to five interviews were used per participant. The interviews took place approximately one per every two to three weeks over the 17 week semester. Refer to Table 5 for the interview schedule. The interviews will be conducted on a one-to-one basis and they will be scheduled as is most convenient with the students. In cases where it became difficult to schedule face-to-face interviews, telephone interviews were employed for convenience to the participants and the

researcher. These were recorded digitally by connecting a digital voice recorder to the handset of the telephone used by the researcher.

The first interview, the personal history interview, was conducted within the first two weeks of the semester and it focused on the cultural and historical experiences of the students which are relevant to online language learning. Combined with the background survey, the personal history interview attempted to establish a baseline of information about each participant. Again, this data was intended to answer research question #1.

Subsequent interviews were based on the overall status of the learner and his or her development towards learning the language and utilizing the online courseware and its tools as relevant to the overall research questions. These interviews contained predetermined questions targeting previous experiences, mediational tools, components of the learners' activity systems, and contradictions and disturbances within online language learning. These topics directly relate to the research questions. They also built on the observation conducted prior to each interview and attempted to confirm data collected, thus creating a cyclical process of observations and interviews. This also afforded the researcher the opportunity to triangulate data sources for the purpose of data confirmation, and it allowed the researcher to understand what happened from the view point of the participant. Appendix E contains the completed sets of interview questions. It is important to note that many of the subsequent interview questions were created after the preceding field observation. Interviews were used to collect information about the students' participation in the online learning environment. They were also used to stimulate participants' reflection of particular events identified by the researcher. Before

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the actual data collection, the interview questions were reviewed, discussed, and amended where deemed necessary by the researcher and the dissertation committee.

Observations

As noted previously the interviews and observations combined to form a cycle of data collection. After the initial background survey and the personal history interview, the researcher conducted the first field observation, which was followed by another interview. Observations were related to the learners' use of the online courseware and its tools to further their language learning. A cycle of three field observations and three interviews were conducted for each online language learner. Refer to Table 5 for the observation schedule. These observations took place in the students' natural environment for participating in the online course. A conscious decision was made by the researcher not to force the student participants to complete their online work in a more controlled setting such as a prescribed computer lab or personal office. It was felt that doing so would artificially eliminate part of the context of the students' participation in online language learning. As such, the participants' natural setting varied from a campus computer lab to the students' personal dwelling, but this was entirely their preference.

During the observations field notes were taken and the sessions were video recorded. The students on-screen and off-screen actions were video recorded and saved electronically. The observations were used to collect data that provided examples of the participants' online learning, and they also instigated thought-provoking questions for the subsequent interviews. The primary focus of the observations was the use of mediational tools and the occurrence of contradictions in online learning. This decision was based

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principally on the nature of the study and the conceptual framework provided by AT. This research did not intend to focus primarily on collaborative activity, which was different from most AT research in CALL. This decision was based on logistical issues related to the course structure, which prevented adequate and consistent grouping of students online. In addition, the tasks completed in the observations varied from student to student depending on the individual's progress in the assigned lesson. Again, this decision was due to the general rules of the course, which assigned a due date but did not mandate when and in what order each exercise had to be completed. Furthermore, the researcher deemed it more appropriate to observe the learners in their natural progression of the course, as opposed to artificially dictating which exercise should be completed during a given observation.

During the field observations, on-screen action recordings were taken to further document the participants' use of mediational tools. Furthermore, charting matrices were used to document the occurrences of mediational tool use, and the researcher kept a log of notes for further examination. After each field observation the researcher began the process of preliminary data analysis by reviewing the video tapes and the field notes. Data collected via observation and video were intended to answer research questions #2, #3, and #4. Important preliminary findings were then inserted into the content of the subsequent interview with the participant as a form of stimulated recall. Also following each observation the researcher made an entry in the researcher journal to aid in clarifying and recording information while it was still fresh.

Review of Supplementary Materials

A review of supplementary materials was conducted to gather data related to the inner workings of the course as framed by AT, including the community, course rules and policies, and division of labor. This review included a content analysis (Krippendorff, 2004) of the course syllabus and other documents posted in Blackboard, course instructions given via Blackboard. The review of supplementary course materials was used to elucidate the sociocultural context of the online course. This review also aided in establishing the rules, division of labor, etc. in the overall activity system. This information was used to answer research questions #2 and #4.

Researcher Journal

In this study a researcher journal was kept for the purpose of tracking the general proceedings of the study, the decision making processes related to data collection and data analysis, and the forming of preliminary conclusions during the process. Lincoln and Guba (1985, p. 328) discuss how the researcher journal aids in establishing trustworthiness of potential results. They also recommend that the researcher maintain a journal for the purpose of creating a calendar to identify pertinent events, keeping track of the researcher's reflections, and noting methodological decisions. Although the format of the researcher journal for this research did not contain these three pieces exclusively, they were major focal points in the entries. As such, the researcher made weekly entries, which included entries after each interview and observation conducted with the participants. These contained reflective comments about the data collection process and

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preliminary identification of important themes. Collectively, this information was used to answer each of the research questions.

Piloted Instruments

Before the actual data collection period commenced, several data collection techniques were piloted on two students who had previously completed the online Spanish course. The collection techniques piloted included the interview questions and the rubrics used for field observations and subsequent coding of data. The purpose of piloting these techniques and instruments was to determine whether the interview questions elicited the kind of data required for answering the research questions and to test the ability of the *a priori* rubrics to elicit and organize the data as collected in interviews and field observations.

Through conducting the pilot interviews, several useful insights were revealed that subsequently altered the data collection procedures utilized for the actual study. First, the two participants of the pilot study experienced trouble in understanding several of the key AT concepts presented in the interview questions, such as contradictions and disturbances. Thus, these terms were ultimately replaced by more simplistic nomenclature, such as problems or tensions. Second, due to the nature of distance learning students and their varying schedules, it became apparent that meeting face-to-face for all interviews was difficult to accomplish. As a result of this conflict, the researcher ultimately employed telephone-based interviews, which were digitally recorded.

With regard to testing the rubrics utilized in the data collection procedures, two key insights were revealed. First, the rubric used for field observations began with four predetermined categories based on the research questions: previous experiences, activity systems, mediational tools, and contradictions. Based on the pilot it was determined that the initial, categorical scheme placed pressure on the researcher to observe, record, and classify data immediately during the field observation. This was not deemed beneficial to the overall purpose of the research project. To allow for more focused observation of the students' online learning, the rubric was ultimately simplified to two basic categories: notes for observations of the students' physical actions and the researcher's thoughts.

Second, the rubric used for organizing data related to the learners' use of mediational tools was also modified after being piloted. The original form provided for documenting and organizing the participants' use of computer-based tools; however, after working with the data collected with the two participants, it was apparent that they used many non computer-based tools in addition to the computer. As a result of this observation, the mediational tool rubric was modified to include a category for non-electronic tools.

Data Analysis

AT, as described in chapter 2, was adopted for the theoretical framework of the study, and thus it guides the data analysis phase of the study. AT provided an existing framework for examining and describing the processes involved in learning and development, which enabled documenting the complex nature of the online environment, its available tools, and the variety of communities that existed in the course. Thus, the

research began with an *a priori* framework intended to guide data collection and subsequent data analysis. This framework was used as a lens for viewing and analyzing the data of this study. It can be argued that academic research is largely symbolic because it reduces the elements of the study to a finite research article or in this case a dissertation. Lantolf and Thorne (2006) make this point:

> Academic production involves essentialization as written description and analyses are necessarily a reduced symbolic representation of the phenomena under study. We make the argument that activity theory offers a descriptive and analytic framework that problematizes some of the reifications that occlude more holistic approaches to SLA research and praxis (p. 229).

As described, AT enables researchers to concretely represent learning. It provides conceptual tools which enable researchers to describe and portray learners' actions in online learning. Using these conceptual tools, specific data analysis procedures were taken for each research question.

The following sections are intended to delineate these procedures. First, the general data analysis procedures are explained. Second, step by step data analysis procedures are explicated for a thorough understanding of how the data collected were used to answer each research question.

General Data Analysis Procedures

As discussed previously in this chapter, the primary unit of analysis for this study was the individual learner's activity system, with a secondary focus on interacting activity systems where deemed appropriate in the context of the research. In this manner

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the data analysis process of this research drew heavily from the work of Miles and

Huberman (1994, pp. 10-12), which describes qualitative data analysis in three phases:

data reduction, data display, and conclusion drawing and verification. It is important to

note that these phases were considered to be cyclical processes that occurred throughout

the duration of the research project. They did not occur only once, and at times the steps

overlapped.

First, data reduction is the process of condensing obtained data through

summarizing, coding, finding themes, and clustering themes. This process allowed the

researcher to systematically code the data and discard any irrelevant data. Data reduction

allowed data collection and analysis to become more manageable for the researcher. This

study began data reduction with the initial background survey and the selection of

participants, and it continued through each interview and observation process. All data

gathered were reviewed and coded by number according to their relevancy to the research

questions. In addition, the data were coded to define the learners' activity system

including the predetermined AT categories: subject, community, division of labor, rules,

instruments, and outcome. Other codes were established as new themes emerge from the

data collected. To accomplish this, the constant comparison method was used to identify

emerging themes (Glaser & Strauss, 1967; Lincoln & Guba, 1985).

Second, data display is the process by which the reduced data is portrayed through

summaries, vignettes, diagrams, matrices, etc. Once the researcher had identified all

emerging themes and categories from the data, this data was used to create further

diagrams and matrices. These data displays aided in further data reduction and viewing

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the data in a more organized manner, which also enabled drawing conclusions from the research process.

Third, conclusion drawing and verification is when the researcher interprets the data to build connections and to further explain conclusions. Lincoln and Guba (1985) indicate that this process involves clustering, counting, comparing and contrasting, triangulation, finding negative cases, and member checking when applicable. This process drew from the previous two steps of data analysis. In particular, by using the data displays the researcher was able to apply knowledge taken from the theoretical framework and the review of current literature to draw conclusions about online language learning. Last, these findings were confirmed by member checking, and triangulation was established through comparing and contrasting multiple data sources to make a particular knowledge claim.

Analysis of interview transcripts

The data collected through the interviews were digitally recorded, transcribed, and coded. The coded data were analyzed for emerging themes using the constant comparison method (Glaser & Strauss, 1967). For the purpose of data analysis the interview transcripts were labeled by number and participant identifying information. The transcript lines were numbered starting with 1 and proceeding through the number of applicable lines. Each subsequent transcript began at line 1. A color coding system was used to distinguish between English and Spanish utterances where applicable. Black was used to identify English, and green identified Spanish.

Data analysis was primarily exploratory in nature. Although the research applied an *a priori* theoretical framework established by AT, the overall intent was to explore and confirm emergent themes that became relevant throughout the study with the *a priori* categories of sociohistorical experiences, activity systems, mediational tools, and contradictions. For this purpose the researcher used member checking, data saturation, and data triangulation as means of verifying data and findings. Pattern coding (Miles & Huberman, 1994) and constant comparison analysis (Glaser & Strauss, 1967) were used to identify themes, using literature based themes and emergent themes. Using AT and SCT as guidelines it was the researcher's responsibility for creating new categories that emerge from the data. The set of categories were established from the data provided by the participants or from existing literature where relevant. Names for categories came directly from the data provided by the participants, from existing literature, or were named as deemed appropriate by the researcher and colleagues. Categories as defined by AT were specified *a priori*, however all other categories were specified iteratively. In addition, this research did not attempt to establish grounded theory because the research relied heavily on Activity Theory.

Coding of Data

Coding of data for this research was conducted in a two-part process in which the data were reduced and analyzed by means of thematic codes. The initial stage of the coding process allowed the researcher to identify episodic chunks of the data, which were best suited to answer the research questions. With this in mind, the initial coding process was designed to identify the following themes as expressed in the research questions:

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previous experiences (PE), the activity systems and their defining parts (AS), mediational tools (MT), and contradictions and disturbances (CD). During the initial coding process the researcher applied the rubrics as described in Appendices G-I.

Subsequently, the second phase of coding included using the constant comparative method (Glaser & Strauss, 1967) in which segments of the interview transcripts and researcher field notes were reviewed to determine what emergent themes became apparent within the *a priori* categories. As individual codes emerged from the data, they were constantly compared to all other codes to identify similarities, differences, and general patterns. As thematic codes were revealed in this process, they were named, in part by using key concepts as presented in AT, and as deemed appropriate by the lead researcher and the co-rater.

To increase the validity of the coding process, a second rater also participated in the coding process. This co-rater was a clinical psychologist who was also familiar with Vygotskian SCT and AT prior to the research. To ensure that he would be able to relate these theoretical frameworks to online language learning, the lead researcher presented him an overview of the theories and related research as discussed previously in chapter 2. After this initial introduction, the co-rater then had an opportunity to practice coding with data taken from the pilot study. At this point it was deemed that the co-rater had sufficient ability to serve as a rater. Subsequently, in the actual research the interrater coded a sample of the transcribed data to identify relevant themes. To calculate interrater reliability the percent agreement method was used as presented in Miles & Huberman (1994, p. 64). This process resulted in an interrater reliability of 85% agreement. Then,

where there were conflicting themes identified in the data, both raters discussed these discrepancies, and it was decided mutually that the same chunks of data could contain multiple themes.

After this discussion of multiple themes being present, the raters reexamined a second sample of the transcribed data and an interrater reliability of 100% agreement was reached. Thus, it is important to note that several portions of the text-based data were coded for multiple themes using multiple rubrics. This was expected as there was an overlap in some of the concepts presented in the research questions. For the cases where there was an overlap, the same data were used to answer all the relevant research questions.

The themes revealed in this coding process gradually emerged as the researcher became intimate with the data. Then, associations were made with the interview questions and overall research questions. It was also important to consider these emergent themes in relation to the major trends and gaps in the literature base as presented in chapter 2. Last, throughout the coding of the data an effort was made to establish these themes by rooting them in the evidence provided by the data. Ultimately, these emerging themes, as based on the data and presented in the conceptual framework of AT, became the major findings of my study.

Analysis of Observation Data

Data gathered from the field observations consisted of the off-screen recordings, on-screen recordings, and the researcher's field notes. First, the off-screen recordings were transcribed to include the participants' physical movements and verbal interactions

where applicable. These transcripts were labeled by number and participant identifying

information. The transcript lines were numbered starting with 1 and proceeding through

the number of applicable lines. Each subsequent transcript began at line 1. A color coding

system was used to distinguish between English and Spanish utterances where applicable.

Black was used to identify English, and green identified Spanish. All physical

movements were noted in the margins where relevant.

Second, on-screen recordings were made using a digital video camera. One major

difficulty with transcribing video data was that there was not a plethora of verbal data;

therefore, it was important to portray this data in a manner that allows readers to get an

accurate depiction of what actually occurred. For this purpose on-screen actions were

categorized by episode, and a click-by-click description was not deemed necessary. After

watching and listening to the video recordings of the students' online language learning,

the researcher identified episodes based on the students' actions and relative location in

EN LÍNEA. For example, a student completing a particular section within the courseware

was labeled as an episode, and actions performed within the section were labeled as

subcomponents, such as utilizing an online dictionary or referring to the physical

textbook. These episodes were listed in the researcher's event log as described in

(Bodker, 1996, p. 163), "an event log of the video record provided a description and

chronological index of observed events. The analysis then proceeded with an

identification and careful transcription of sequences of activity of particular interest."

Bodker (1996) goes on to explain how these episodes can be mapped for detailed analysis

"mapping consisted of listing in one dimension the objects that the user focused on

during the session and in the other the narrative of the situation, supplemented with annotations of the user's physical acting" (p. 163). This manner of mapping the computer based activity to reconstruct computer usage allowed for "an adequate understanding of human-computer interaction" (Kaptelinin, 1996).

Where necessary, red was used to identify any pertinent on-screen actions. Transcripts of observations included on-screen actions and any verbal and physical actions that occurred off-screen. These transcriptions were displayed side by side with the off-screen actions paired correspondingly with on-screen actions. On-screen action recordings were used to discuss the participants' use of mediational tools. Last, interrater reliability was established by verifying a sample portion of the data.

Answering the Research Questions

With these general data analysis procedures in mind, the researcher also applied more specific steps for answering the individual research questions. Table 7 describes the data analysis procedures briefly, and these steps are described more specifically in the subsequent sections.

Table 7

Overview of data analysis methods

Research questions	Data collected	Data analysis methods
1. Nature of the previous linguistic and technology experiences	Demographic information and personal experiences collected via survey and interview	AT analysis Constant comparison method Video episode analysis
2. Changes in the learners' activity systems	Descriptions of activity system components collected via background survey, interviews, video data, and observations	AT analysis Constant comparison method Video episode analysis Content analysis
3. Nature of the use of mediational tools	Descriptions of the use of mediational tools via interviews, video data, and observations	AT analysis Constant comparison method Video episode analysis
4. Contradictions and disturbances in online language learning	View of community, rules, and division of labor collected via observations, interviews, and review of supplementary materials	AT analysis Constant comparison method Video episode analysis Content analysis

1. How do the language learners perceive their previous experiences with technology
   and language learning?

   a. What is the nature of the language learners' personal experiences with technology
      and language learning prior to taking the online Spanish course?

   b. How do the students perceive the effects of their previous experiences on their
      current online language learning?

To answer research question #1, the researcher analyzed data from the background survey, the personal history interview, subsequent observations and interviews, and the researcher journal. First, the researcher conducted a content analysis of the background survey and the personal history interview to identify each student's unique personal experiences with technology and language learning. Content analysis is a process for organizing information so that a researcher can make inferences about the characteristics and meaning of unorganized data. This involves organizing the content into themes (Berelson, 1952; Holsti, 1952). Here, the themes were based on the varying levels of technology and language learning expertise. These steps allowed the researcher to define the participant's socio-historical background with technologies and language learning, thus answering question #1a.

Second, to answer question #1b the researcher conducted a complete review of all interview transcripts to find statements related to the students' perceptions of these experiences. This was done electronically by searching for keywords in the text documents such as "I think" or "I feel". Here, the intent was to find any descriptions of how the students' perceived the influence of their previous experiences on their current online language learning. After each step of the review had been taken, the researcher clearly identified the perceived themes that were present.

2. What is the nature of the online language learners' activity systems?

    a. What is the nature of the online language learners' activity systems at the beginning of the course?

b. What changes, if any, occur in the learners' activity systems throughout the duration of the course?

To answer question #2, the researcher analyzed data collected from the background survey and the personal history interview. First, the researcher attempted to identify the components of the learners' activity systems at the beginning of the semester, the focus of question #2a. To accomplish this, the researcher used the coding rubric in Appendix H. This rubric allowed the researcher to focus on and isolate specific characteristics related to the student participants' learning context.

Second, to answer question #2b the researcher identified components of the learners' activity systems at multiple points throughout the semester by examining the series of interviews and observations. Thus, activity systems were created for each participant at the beginning of the semester, six weeks into the semester, and again at twelve weeks. Then, these three activity systems were compared and contrasted using the constant comparison method, and any changes in the systems were identified.

3. What is the nature of the mediational tools used by the learners?
   a. What types of mediational tools are used by the online language learners?
   b. How are the mediational tools used to enable online learning?

To answer question #3, the researcher analyzed data collected from the series of observations and interviews, the field notes, and the researcher journal. First, to answer question #3a the researcher attempted to identify the types of mediational tools used by the online language learners. To accomplish this, the researcher reviewed all video logs

created from video data. Again, the focus here was on visualized behaviors. This review focused on describing the use of mediational tools. A similar process was undertaken electronically for the field notes and the researcher journal. The researcher searched for keywords in the text documents, which helped to describe the learners' use of mediational tools. After this had been done, the researcher clearly identified the perceived themes that were present related to mediational tools.

Second, to answer question #3b the researcher conducted a complete review of all interview transcripts, the field notes, and the researcher journal to find statements related to the learners' use of specific tools. This was done electronically by searching for keywords in the text documents. Question #3b was intended to describe the process of mediation in relation to the use of a particular electronic tool. The next step for research question #3b was to make determinations about how these mediational tools were used in the process of online language learning to determine the nature of their influence on reaching the learners' outcomes for the course.

4. What is the nature of the contradictions and disturbances that arise in online language learning?

    a. What types of contradictions and disturbances arise in online language learning?

    b. If possible, how are the learners able to resolve these contradictions as they occur?

To answer question #4, the researcher considered data collected from the background survey, the personal history interview, the series of observations and interviews, the researcher journal, field notes, and the review of supplementary course

materials. First, to answer research question #4a the researcher attempted to identify any contradictions which occurred in the online language learning process by reviewing the video logs, the interview transcripts, field notes, and the researcher journal. This review focused on describing the contradictions as they occurred. The researcher searched for keywords in the text documents related to conflict that the students encountered in the online courseware. After this had been done, the researcher clearly identified the perceived themes that were present related to contradictions and attempted to describe any contributing factors. In particular, a content analysis was conducted for the review of supplementary course materials in an attempt to identify how the course and university procedures and other activity systems may have contributed in creating tensions. This information also aided in establishing the course rules, university rules, division of labor, community, course goals, course recommendations, and the role of instructors.

Second, to answer question #4b the researcher conducted a complete review of all video logs, interview transcripts, the field notes, and the researcher journal to find statements related to the learners' use of specific tools. This was done electronically by searching for keywords in the text documents. Whereas question #4a was intended to describe the contradictions, question #4b was intended to describe how the learners went about resolving the conflicts as they occurred. The next step for research question #4b was to make determinations about how the learners moved beyond a particular conflict. However, in some cases the participants may not have been able to successfully resolve the tension. This information was also deemed valuable. It was also important to note that this question had the potential to overlap with the previous questions.

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Trustworthiness

To ensure that qualitative research is considered to have the same "rigor" that quantitative research is perceived to have, many researchers call for trustworthiness and credibility (Lincoln & Guba, 1985). Case study researchers (Stake, 1995; Yin, 2003) claim that multiple data sources aid in establishing trustworthiness and credibility for research findings. For this study the findings were validated by: triangulation, checks for alternative explanations and negative evidence, and discussion of findings with research peers and the participants of the study. These methods coupled with a thorough research design and review of the literature helped ensure the validity and reliability of the conclusions (Morse & Richards, 2002). Also, as part of the research process, the researcher journal served as a sort of audit trail, which documented the procedures for each form of data collection and the resulting data analysis procedures. Data gathered in the researcher journal consisted of the researcher's personal thoughts. These were used to document researcher bias, and they allowed for ongoing and informal data analysis throughout the research procedures.

Chapter Four Results

Chapter 4 provides an overview of the data collected with respect to the study's research questions described previously. This overview begins with a brief delineation of the data collected in the study. Then, the data collected throughout the research process will be used to formulate answers to the research questions posited in this study.

1. How do the language learners perceive their previous experiences with technology and language learning?

   a. What is the nature of the language learners' personal experiences with technology and language learning prior to taking the online Spanish course?

   b. How do the students perceive the effects of their previous experiences on their current online language learning?

2. What is the nature of the online language learners' activity systems?

   a. What is the nature of the online language learners' activity systems at the beginning of the course?

   b. What changes, if any, occur in the learners' activity systems throughout the duration of the course?

3. What is the nature of the mediational tools used by the learners?

   a. What types of mediational tools are used by the online language learners?

   b. How are these mediational tools used to enable online learning?

4. What is the nature of the contradictions and disturbances that arise in online language learning?

a. What types of contradictions and disturbances arise in online language learning?

b. If possible, how are the learners able to resolve these contradictions as they occur?

Based on the fluid nature of Sociocultural Theory and Activity Theory the information contained in and sought after by these research questions overlapped in many instances. Having said this, each question has been addressed individually, and there is an explanation offered where any overlap occurred.

The Data

As described previously in chapter 3, the data for this study were collected via a background survey, a personal history interview, a cycle of three observations and three individual interviews, the researcher journal, and the review of supplementary materials. Table 8 provides an overview of the data collected with respect to each participant. From the 212 students enrolled in the online course, seven were selected and solicited for participation in this study. As seen in Table 8, one participant subsequently dropped out of the study, and at this time another student was selected for participation. As described in chapter 3, these participants were selected based on convenience and criterion sampling, which included exhibiting unique characteristics with respect to social context, linguistic experience, or technological experience. It is important to note that not all of the students selected for the study participated in all facets of the data collection. However, these incomplete data sets have been included in the data analysis and the results sections of this study.

Table 8

Overview of data collected

Student	Back. survey	PHI	Observ. #1	Interv. #1	Observ. #2	Interv. #2	Observ. #3	Interv. #3
JA	Yes	Yes	Yes	Yes	No	Yes	No	Yes
RA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
BD	Yes	No	No	No	No	No	No	No
TD	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MD	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
KG	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
JP	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
SS	Yes	Yes	No	Yes	No	Yes	No	No

Background Survey

The background survey was designed principally to gather information

regarding the participants' linguistic and technology experience. Based on this

information five of the seven participants began the course with little previous experience

with Spanish based entirely on high school coursework. Two began the course with

intermediate to advanced experience, and one participant began with no previous

experience. Determining how much linguistic and technology-based experience the

students possessed upon beginning the course allowed for establishing a base line of

information for each participant. From an activity theoretical perspective, this also

afforded the opportunity for tracking individual development with regards to these

characteristics.

Likewise, the survey collected information related to the participants' reasons for

taking the online Spanish course. For example, one of the participants of the study, JP,

chose to take the online Spanish course to refresh herself for a summer trip to Costa Rica.

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Several of the other participants were taking the course solely to fulfill the language requirement and to graduate. Based on these stated reasons and others, which will be described in more depth, the participants were likely to perform differently and with distinct goals and motives in the online course. In addition to recording the participants' linguistic experiences, the survey was intended to note their technology experience. In this regard it became apparent that all of the students were beginning with similar self-perceptions of their skills and experiences based on their academic careers in high school and college. All the participants began with confidence in their technology-based skills. Only one participant, KG, was unique in this regard, because she did not begin using technology more extensively until she returned to college in her late forties. Tables 9 and 10 provide an overview of the data collected via the background survey.

Table 9

Summary of linguistic and technology backgrounds

Participant	Gender	Age	Linguistic experience	Technology experience	Placement exam
JA	F	21	Mexican family, English and Spanish spoken in household, no formal classes	Very comfortable, favorable opinion	Yes, placed into Spanish I
RA	F	24	2 high school Spanish courses, Father is Puerto Rican, limited Spanish growing up	Very comfortable, favorable opinion	No
TD	F	20	No experience	Very comfortable, favorable opinion	No
MD	F	23	2 high school Spanish courses, native speaker of Portuguese	Very comfortable, favorable opinion	No
KG	F	49	1 high school Spanish course 30 years ago, traveled to Spain for pleasure	Very comfortable, favorable opinion, began using technology later in life	No
JP	F	21	5 years of Spanish courses in middle and high school, took AP exam	Very comfortable, favorable opinion	Yes, placed into Spanish I
SS	F	24	2 high school Spanish courses, 1 medical Spanish course for work	Very comfortable, favorable opinion	No

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Table 10

Summary of participants' backgrounds

Participant	Major	Reason for taking the course	Fulfilling language requirement	Goals for the course
JA	Political Science	Learn to read and write Spanish	Yes	Learn proper Spanish, learn to read and write
RA	Chemical Engineering	To be full time student, personal benefit for work	No	Learn to form Spanish sentences for personal use
TD	Political Science	Fulfill requirement	Yes	Obtain a passing grade
MD	Political Science	Fulfill requirement	Yes	Learn more Spanish and grow as a person
KG	Creative Writing	To master the Spanish language	Yes	Obtain the highest level of proficiency possible
JP	International Studies	For graduate school	No	Obtain fluency
SS	American Studies	Fulfill requirement	Yes	To graduate

Personal History Interview

The personal history interview elaborated on some of the information collected in the background survey. Specifically, the interview recorded the participants' personal history with Spanish and technology. Also, it gathered information related to the

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students' environment, schedules, etc. to establish more context and to aid in creating each participant's activity system as described in the theoretical framework, Activity Theory, and the research questions of this study. Table 11 provides an overview of the data collected in this interview.

Table 11

Personal history interview data

Participant	Work	Family life	Why online?	Previous online course?	Where will you work? When?
JA	Full time (M-F) senior secretary for law firm	Lived in Lakeland with fiancée (40 mins.)	Worked full time, needed flexible schedule with few class meetings	Elementary literature, lesson or paper due each week with weekly quiz	At home, will work on weekends
RA	Not working	Single mother lived with parents (1 hr.)	Caring for 2-year old son, flexible work schedule	Engineering management, video fed lecture, written assignments	At home, will work primarily Friday-Sunday
TD	Not working	Lived in apartment near campus with roommate	Heavy course load, no time to go to class meetings	Art, online book and assignments, weekly quiz	At home or library, will work only on weekends
MD	Full time (M-F) legal assistant for law firm	Lived in house with fiancée and his mother (40 mins.)	Registered late, needed flexible schedule	Sociology and archaeology, assignments through Blackboard	At home, will work steadily throughout the week
KG	Part time transcriptionist for church, flexible schedule	Lived near campus with boyfriend	Wanted flexible schedule to work at own pace	Online training materials for previous job, no formal classes	At library or home, will work steadily throughout the week
JP	Full time at Edible Arrangements	Lived on campus with boyfriend and 3 roommates	Registered late, regular courses were full	Geography, archaeology, and music, music files and writing, videos	At library or at home, will work only on Sundays
SS	Full time (M-F) secretary for medical office	Lived in Atlanta home with fiancée	Needed accommodations for distance, needed flexible schedule	Nutrition and Issues in Sports, reading and writing, discussion	At home, will work primarily on weekends

Field Observations and Individual Interviews

The field observations and individual interviews in this study combined to form a cycle of data collection. Each observation initiated the cycle and it was immediately followed by an individual interview with the same participant. Field observations covered one hour each in the students' natural environment for completing the online work. These environments varied from personal homes to the campus library to the Starbucks café located on campus. There were 15 one-hour field observations resulting in roughly 15 hours of video recorded data. In addition, there were 20 individual interviews with the participants, which varied in length, resulting in nearly 500 minutes of audio-recorded data.

Researcher Journal

The researcher journal was used primarily to record the researchers' thoughts throughout the research process with respect to the data collection and data analysis procedures. The journal afforded the opportunity for ongoing and informal data analysis, which was subsequently used to guide the research procedures. It also served to establish an audit trail of these research procedures and to document major decisions related to methodology. Entries were made after each interview and observation conducted with the participants and at other times to discuss prominent themes in the data. The final journal consisted of 44 entries and nearly 10,000 total words.

Review of Supplementary Materials

The review of supplementary materials conducted in this research included a review of relevant documents and web sites related to the online Spanish courses. These documents included the course syllabus, the permit request form, and the course documents related to technical requirements, how to join EN LÍNEA, and how to purchase the EN LÍNEA materials. Furthermore, the web sites reviewed included the foreign language requirement site, the Department of World Language Education site, and the EN LÍNEA site. Specifically, these materials were reviewed in this study to aid in establishing the following components of the learners' activity systems: rules, division of labor, and community.

To identify these components, a modified version of content analysis (Krippendorff, 2004) using the theoretical framework provided by Activity Theory was used to document and record the salient features of each supplementary material. The goal of the review was to categorize and classify the components of the materials according to the themes established in the theoretical framework: rules, division of labor, and community. Appendices J-Q provide an overview of the data collected in this process.

<center>*Introduction to the Case Profiles*</center>

Before reviewing the results of this study, it is important to consider the individual cases investigated. The following section presents an introduction to the individual case profiles in a narrative format. Although some of the information presented in these initial profiles is discussed later in regards to answering the research

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questions, the purpose here is to acquaint the readers with each participant's personal story. These descriptions may afford the readers more depth in their understanding of each participant and their online language learning.

Case #1 JA

JA was a 21 year old female. She was an undergraduate student who was studying political science at the university. She lived in Lakeland, Florida approximately 20-30 minutes from the university. JA was a second generation Mexican-American. Her native language was English; however, English and Spanish were spoken in her household as a child. She had never taken any formal Spanish classes; however, she did speak limited Spanish. She did not take the placement exam at the university prior to registering for this course. She claimed to have working knowledge in listening and speaking, but no knowledge of reading and writing in Spanish. With regards to technology, JA began the course having previously taken online courses at the university. She indicated that she felt being capable and comfortable with most technologies. She anticipated completing the online assignments primarily at night during the week or during lunch breaks at work, and during the mornings on the weekends. Her participation in the course depended greatly on her full time work schedule as a legal assistant to a law firm. She participated mainly from home using a personal computer.

Case #2 TD

TD was a 20 year old female. She was an undergraduate studying political science at the university. She lived in Miami, Florida. Her native language was English, and she had never taken a Spanish course previously. She stated that she was taking this course to

fulfill the language requirement. She hoped to achieve a passing grade and to be able to have basic Spanish speaking skills. With regards to technology, TD began the course having previously taken online courses at the university. She indicated that she felt being capable and comfortable with most technologies; however, she also expressed some uncertainty about using computers for learning Spanish in this course. She anticipated completing the online assignments primarily on the weekends, Friday through Sunday. This was based on her class schedule and full time work schedule. She worked primarily from home using a laptop computer.

Case #3 MD

MD was a 23 year old female. She was an undergraduate studying political science at the university. She was born in Rhode Island, but throughout the course she lived in Riverview, Florida with her fiancée and mother in law. This was approximately 35 minutes from the campus. She grew up speaking English and Portuguese. She had previously taken two Spanish courses in high school, which were 5 years ago. MD claimed to remember very little from these previous courses. With regards to technology, MD began the course having previously taken online courses at the university. She indicated that she felt being capable and comfortable with most technologies, and that she frequently used computers at work. She anticipated completing the online assignments primarily on the weekends, Friday through Sunday. This was based on her full time work schedule as a legal assistant to a law firm. She worked primarily from home on a personal computer.

Case #4 KG

KG was a 49 year old female. She was an undergraduate studying creative writing at the university. She was born in Tennessee, and throughout the course she lived in Tampa, Florida with her boyfriend. She was a native speaker of English and knew no other languages. She had previously taken one Spanish course about 30 years ago in high school. She described this experience in terms of "textbook homework" and "limited speaking of the language in class". She claimed to have limited knowledge of speaking, listening, reading, and writing in Spanish. She was taking the course to master the Spanish language and to fulfill the foreign language requirement. With regards to technology, KG began the course having previously taken online courses at the university. She indicated that she felt being capable and comfortable with most technologies. Unlike the other student participants, she began using computers later in life after she returned to college. She anticipated completing the assignments for this course during the day from home or a computer lab on campus including the library.

Case #5 JP

JP was a 21 year old female. She was an undergraduate studying international studies at the university. She was born in New York. She was a native speaker of English; however, Italian was also spoken in her household as a child. Beginning in 7th grade she took Spanish courses for 5 years, through 11th grade. She also took the A.P. exam for Spanish but did not pass. She attributed this to the speaking portion of the exam. Her last Spanish class was 5 years ago. At the university she also took the placement exam, and she was placed into Spanish 1. She claimed to have working knowledge of listening and

reading skills and basic knowledge of speaking and writing skills. She was taking this course as an elective to refresh her existing Spanish skills to prepare for traveling to Costa Rica this coming summer. With regards to technology, JP began the course having previously taken online courses at the university. Like several of the other participants, she indicated that she felt being capable and comfortable with most technologies. She anticipated working all days of the week to complete the assignments, and she worked from a variety of places including home, computer labs, on campus residence, and at work. Factors that affected her schedule are work, other coursework, and convenience.

Case #6 SS

SS was a 24 year old female. She was an undergraduate studying American studies at the university. She was born in Florida and she lived in Atlanta, GA throughout the course. As a child English was the only language spoken in her household. She had previously taken 2 Spanish courses in high school and a Spanish course for medical professionals through her workplace. She claimed to have basic knowledge of listening, speaking, reading, and writing Spanish. She was taking this course as a requirement to graduate. With regards to technology, SS began the course having previously taken online courses at the university. She indicated that she felt being capable and comfortable with most technologies, and she also stated that she used computers on a daily basis at work. She anticipated working online from home on Mondays, Wednesdays, Fridays, and Saturdays. She also commuted between Atlanta and Florida for the purpose of completing this course. It is important to note that SS and I were unable to work out a system to conduct the observations being that she lives and works full time in Atlanta.

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This participant ultimately dropped the course and she did not participate in all facets of the data collection for this study.

Case #7 RA

RA was a year old female. She was an undergraduate studying chemical engineering at the university. She was born in and she lived in Tarpon Springs, FL throughout the course. RA was a single mother of a two-year old son, and she lived with her parents. Growing up her native language was English; however, she was exposed to her parents speaking some Spanish and Tagalong. She had previously taken Spanish courses in high school. She was taking this course as an elective course and to refresh her abilities in Spanish. With regards to technology, RA began the course having previously taken online courses at the university. She also indicated that she felt being capable and comfortable with most technologies. RA anticipated completing the online work primarily at home during the night when her son had gone to sleep.

The Research Questions

With an initial understanding of the case profiles investigated in this research, it is now possible to begin answering the research questions. Because this study and its research questions were guided chiefly by the tenets of Activity Theory, it was difficult to answer these questions independently without regard to their overlapping nature. For example, a student may have encountered a contradiction in their online learning, which was driven principally by previous linguistic experiences that were interfering with the current learning process. Having said this, the research questions will be presented here individually with an explanation of overlapping results where necessary.

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Research Question 1: Linguistic and Technology Experiences

How do the language learners perceive their previous experiences with technology and language learning?

   a.   What is the nature of the language learners' personal experiences with technology and language learning prior to taking the online Spanish course?

   b.   How do the students perceive the effects of their previous experiences on their current online language learning?

   This question focused on the learners' past experiences to establish their socio-historical context and their perceptions of their current online learning to aid in establishing their current context. It was also intended to determine how the learners perceived the effects of these past experiences on their present online language learning. To answer this question the data derived principally from the background survey and the personal history interview; however, it was also necessary to review the researcher field notes and the transcripts for the observations and interviews to answer the sub questions.

   Inherent to Sociocultural Theory and Activity Theory is the idea that learners come into the learning context with unique and meaningful socio-historical experiences. These experiences play an important role in the present and future development of the individual. They aid in shaping how the individual views and perceives his or her present context and the available mediational tools, including language and technology-based tools. For the purpose of this research an emphasis was placed on the learners' previous linguistic and technology experiences as they relate to the students' current online language learning context. These linguistic and technology experiences will be discussed

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in the following section, which is followed by a discussion of how the students perceived

the impact of these previous experiences on their current online language learning.

Linguistic experiences

Of the students that participated in this research four of the seven began the

course with little previous experience with Spanish. Like many other college level

students, this previous exposure to Spanish was based entirely on high school

coursework. Although these four students had slightly different high school experiences

with Spanish, MD's case, as presented in Excerpt 1, appeared to reflect the general

experiences of each.

Excerpt 1. PHI_MD

Could you describe your previous experiences with learning Spanish?
I took Spanish I and Spanish II in when I was a junior in high school. I believe
that took a full year. I did fairly well. I did very well. Actually it came easily to
me at that point. I am not really sure if it was because of the material, the
professor, or what have you. You know I did well. From what I retained from
that, not so much. Just little things.
How would you describe your current abilities in Spanish?
Fairly minimal, just kind of the basic things that you maybe even hear, just like
hmm, I don't know, like "qué pasa?" Things that everyone knows what it means,
but at work sometimes people look at me and I am Portuguese so they assume I
know Spanish and they will start speaking and boy do they speak fast so I can't
understand anything that they are saying.

MD's case represented a student who had taken Spanish previously in high school, yet

she claimed not to remember that much of the material learned. To further support this,

MD did take the department's Spanish placement exam prior to registration and she

scored in the Spanish I level. Another student, TD, began the course with no prior

exposure to Spanish. When asked about her previous experiences with learning Spanish,

she responded, "I have actually never taken a Spanish course." Therefore, unlike the previously mentioned participants she began the course with minimal knowledge of Spanish.

Last, the two remaining participants, JA and JP, began the course with intermediate to advanced experience; however, their prior experiences with Spanish varied immensely. First, JA was the daughter of a Mexican father and a Mexican-American mother. She grew up speaking Spanish, yet she never received formal instruction. As a result she entered the course with limited knowledge of reading, writing, and grammar skills. In Excerpt 2 she identified her knowledge of Spanish as being the slang version.

Excerpt 2. PHI_JA

Could you describe your previous experiences with learning Spanish?
I grew up speaking Spanish in the household but I have never actually learned how to read or write it or the correct. I kind of learned the slang of it. My dad was from a ranch in Mexico and my mom was born in Texas.

The second participant with intermediate to advanced experience with Spanish, JP, did receive 6 years of formal instruction prior to beginning the online course at the university. She even took the Advanced Placement exam for Spanish, but she did not pass. Before registering for the online Spanish I course, she also took the department's placement exam, and she placed into Spanish I. In addition to prior Spanish courses, JP started the class with 4 previous college level courses in Italian. In Excerpt 3 JP discussed her previous experiences.

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Excerpt 3. PHI_JP

Could you describe your previous experiences with learning Spanish?
Um, I first started taking Spanish classes in sixth grade. Um, in New York, that is
where I am from. And the curriculum up there, they want kids to learn Spanish
right away. So I started taking classes in sixth grade, and I took Spanish in sixth,
seven, and eighth grade. And then I took Spanish in high school for ninth and
tenth grade, and I did really well so I was in AP Spanish, but I only got a 2 on the
exam. So I didn't get credit for it, but I was actually the first non-Spanish person
in my high school to take the AP Spanish course. I mean my school was
predominantly Spanish anyway. But, I didn't pass it so I had to take a foreign
language when I got to college. So that's pretty much, and this is my first Spanish
class in college, because I fulfilled my foreign language requirement with Italian
my first year.
So you have taken 2 college level Italian courses?
I have taken 4 college level Italian courses.
Ok, could you tell me a little about those courses?
They weren't online. They were classroom settings, very small groups, like 22
kids. I took 2 classes in New York and 2 classes here. They were both very
similar, they were both classroom settings. Nothing really online at all except for
our lab. We had a little bit of lab work to do online. Just a little bit though.
**And when you were doing the labs online, did you have any conflicts with
that?**
No, not at all.
Ok, do you currently speak or know any other languages?
No.
How would you describe your current abilities in Italian?
I look at it like this. I only took 2 full years of Italian, but I have taken like 6 years
of Spanish in total in my life, maybe about, yeah maybe a little more. My mom,
my whole family speaks Italian. If they try to speak to me, I can only respond in
Spanish. So, I feel like, my theory is that because I started taking Spanish so
young, I retained it better. But I took 2 years of intense Italian at the college level
and I can just barely keep a conversation, but in Spanish I can respond much
better. It's not really good, I guess you could say.

From the descriptions of these students' linguistic experiences prior to taking the online

Spanish I course described in this study, it can be seen that students began the course

with varying experiences. These cases demonstrated the extremes possible with regards

to beginning a Spanish I course at the university level: no experience, little experience,

and intermediate to advanced experience. JA's case was unique in of itself, because she

was a heritage Spanish speaker. The cases also demonstrated that college students may enter a Spanish course having previously studied other languages. For example, MD was a native speaker of Portuguese and JP had previously studied Italian at the college level. These were the types of linguistic experiences that helped shape the students' current activities in the online language learning setting.

Technology experiences

It is also important to consider the students' previous experiences as they related to technology. All of the students that participated in the research began with similar skills, experiences, and confidence levels with respect to technology. In each case these previous experiences were based almost entirely on academic schoolwork stemming from high school and prior college level courses. Only one participant, KG, was unique in this regard, because she did not begin using technology more extensively until she returned to college in her late forties. There were no real variations in the types of technologies used previously and the levels of expertise with these technologies. In addition, there were no major differences in the types of technologies that were reported as being used commonly by the participants. For example, MD considered herself to be capable with computers, because she worked with computers on a daily basis. In Excerpt 4 she also described the variety of programs and applications that she was most familiar with based on her daily needs for school and work. Like most of the students she was most familiar with Microsoft Office applications such as Word, PowerPoint, and Excel. She discussed this in Excerpt 4.

Excerpt 4. MD_PHI

Do you consider yourself capable when it comes to using computers?
Yes, I do.
What makes you say that?
I just feel that they come easily to me. I work in front of a computer all day long,
and I, just being in front of it all day. It comes pretty easily.
**Could you describe your previous experience with using computers? For
example, what types of things can you do using computers?**
Hmm, as far as like Microsoft, PowerPoint, Excel, all those programs, I am very
familiar with, because of work, first of all. As far as the ins and outs of computers
I couldn't take it apart and put it back together again or anything. But as far as
Internet Explorer, or scanning and faxing or anything like that, I just do very well
because of my job.

Building on this description of the participants' general knowledge of computers, it was

also found that all of the participants reported using computers mostly for word

processing, emailing, and searching the web for information. KG's description of Internet

searching accounted for this in Excerpt 5.

Excerpt 5. KG_PHI

What types of things do you typically do on the Internet?
Mainly when I go on the Internet I do research. If there is something that I have a
question about. It could be anything from the title of a movie, the title of a book,
the history of someone, some questions that I might have. I think that recently I
was looking something up on Nostradamus. I couldn't remember whether he was
Spanish or French. I had a book, I had a hardcopy of Nostradamus and some of
the facts that they had mentioned in there. I went online to see if I could find more
detail. I use it for shopping. I love to go shopping online. I love getting things
delivered right to my door, especially with my schedule the way that it is.

Another theme that became apparent in the data was that of students using and

learning how to use computers and specific programs at work. Like MD, SS also reported

using computers while at work. Through the personal history interviews with the

students, it also became apparent that none of the students felt that they were experts with

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technology, and none felt comfortable with the inner workings of computers or computer

programming and such. SS discussed this in Excerpt 6.

Excerpt 6. PHI_SS

**What types of things can you do using computers? What types of programs
are you capable of using?**
I am really good with Microsoft Word. I am really good with data entry on Excel
and some spreadsheet creations. I am good with different software programs,
because I do use them at work. Our patient charts are electronic. My job is 100%
computerized. I am not very good with hooking computers up, like the wiring and
stuff, because I just don't do it very often.

SS's description of her limitations with computers was indicative of all of the

participants. It demonstrated that the students began the online course with existing

knowledge of computers and computer-based technologies; however, it also indicated

that they still had limitations and that they may have needed assistance with certain

aspects of technology.

The only real variations in the students' reported technology experiences came in

relation to their previous online courses. These reportings served as the foundation for

their knowledge of and experiences related to online courses. For example, in Excerpt 7

JA described a geography course that she had previously taken online in which there

were weekly assignments and no real face-to-face class meetings.

Excerpt 7. PHI_JA

Have you ever taken another online course? Could you describe this course?
I have had elementary literature, and I have had research skills and development,
and I have had a geography class, and that's it.
Were these complete online courses?
Yes, all three of them were complete online.
Did you have any face-to-face meetings?

No, other than the orientations, no.

And, could you tell me a little bit about how the course was structured, how the instruction was delivered online?

You would have, you purchase the book, and each week a lesson or a paper would be due by that week. You could upload it or email it to the professor. And your tests were online at a certain day and time. You had a certain day, from 12am in the morning to 12am the following morning to complete the test. And you could take the test any time between that day you could take the test. It would be time, and the computer visually timed it for you and there was a clock that let you know how much time was left. And that's how we would take the test. Everything else was just assignments that were due on a weekly basis.

In Excerpt 7 JA described online tests and weekly assignments that were submitted and managed by the computer system. Similar to JA's description of her previous online course, in Excerpt 8 RA described an engineering management course that she took online. Her course included a live video feed of the course lecture and the ability for the instructor to interact with the students in real time.

Excerpt 8. PHI_RA

Have you ever taken another online course?

Yes, I have.

Could you describe this course?

I took an engineering management course, a very dry course, engineering management.

How was the material structured online?

There was a video feed. They had the class at school and I could have gone any time if I wanted to, but I didn't have time so I didn't. There was a video you could watch it in real time or you could watch it later on. And then if you wanted to talk, if you are watching it in real time, you would just hit a button and converse with the class. And then it was basically just a dry lecture and he would say what do you want to write a paper about and do a presentation on.

From these two brief descriptions of the students' previous online courses, one can see that the students had been exposed previously to online courses and a variety of technologies to accomplish online learning and instruction. It is also important to note

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that although all of the students reported taking online courses previously, none of the students reported using technology in their previous language courses. Again, these types of experiences in previous online courses and even the lack of experience with technology for foreign languages helped to shape the students' perception of the current online course. The online course experiences combined with their existing knowledge of computers and relevant tools ultimately affected the manner in which the students will participated in the current activity of online language learning.

From the data collected in regards to the students' prior technology experiences it appeared that each began the online course with existing skills and knowledge. There were limitations to their knowledge and skills; however, it did appear that the students were aware of them. Based on the descriptions of the participant's previous online learning experiences, none were as interactive as the online Spanish course investigated in this study. In addition, none appeared to be as diverse in types of activities used for the purpose of learning and knowledge rehearsal. Specifically, these previous experiences aided in molding the students' use and choice of mediational tools, which will be discussed in greater detail in the section for question three.

Perceived effects of previous experiences

Although the participants of this study had never taken a Spanish course online, their previous exposure to Spanish and the use of technology did appear to shape the students' perceptions of the current online course. The participants indicated that they perceived some effects of these previous experiences including those negative and positive. For example, beginning the online Spanish course with varying ability levels in

Spanish appeared to cause different perceptions of the current language learning

experience and the impact of these previous experiences. JA, the heritage speaker, began

the course with intermediate to advanced abilities in Spanish, yet she still perceived

several potential hindrances caused by her experience. She discussed this in Excerpt 9.

Excerpt 9. PHI_JA

Do you think that your previous experiences will help or hinder your success in this course? What makes you say that?
I think a little bit of both, because I have learned some, on the speaking it and the form of speaking, the format, the verb and then the noun or the noun and then the verb. I can probably, I know how to speak it in order, but I think it will kind of hurt me too because I have learned some words that are not the proper way of speaking it.

JA's initial perception of her previous linguistic experience was both positive and

negative. These perceptions were described prior to beginning the online assignments in

the Spanish class. After several weeks in the online Spanish course JA repeated the same

impressions. These perceptions are contained in the Excerpt 10 below.

Excerpt 10. INT1_JA

How has your previous exposure to Spanish helped or hindered you in this course?
It helps me with the pronunciation because I have heard my family say things. I can basically pronounce the words correctly, but it didn't help me at all with the grammar or spelling or accent marks, only with the pronunciation.

Here, JA reinforced her initial perception after actually experiencing the negative and

positive effects of her previous linguistic experiences. Also, JA's perception of her

previous Spanish experience was typical of a heritage speaker who had never received

formal language instruction. Similar to JA, JP began the course with intermediate to

advanced experience in Spanish; however, she perceived her experiences as being solely

beneficial to her current online learning context. She, however, commented only on how

her existing knowledge of Spanish would give her an advantage over other students in the

course who were just beginning to learn the language. Later in the semester she

confirmed this perception, in Excerpt 11, when she described how her prior knowledge

had allowed her to move more quickly through the assignments and even to the point of

not having to view the instructional tutorials when presented with new information.

Excerpt 11. PHI_JP

Do you think that your previous experiences will help or hinder your success in this course?
Help me definitely.
What makes you say that?
Because, I mean, I mean it wouldn't hurt me. I mean I know what I know because of the other classes. I mean it is coming back to me when I am sitting and doing the other assignments. Like, sometimes I don't have time to read through the entire tutorial and to do like everything that I am supposed to do online so I will like go to the assignments first. Most of the time I can just do it by myself without actually having to read the chapter. Like, I can just remember it from previous classes.
Do you think that your previous classes in Italian will help or hinder you?
Hinder me. They are so similar. My whole family tells me all the time that my biggest mistake was that I did take Italian. I should have just stuck with Spanish through college as my foreign language requirement. I should have just kept up with the Spanish, because I was pretty good in high school. You know, I was able to carry on a conversation and all that stuff. I should have just kept going, but I took Italian. And sometimes I feel like sometimes I mix the languages up because they are so similar. Or I will say something and I will be like wait, is that. Especially like numbers and stuff, because numbers are pretty simple whether I say it in Italian or Spanish, that Spanish or Italian person will still understand what I am saying. But, still I mixed things like that up pretty easily.

By comparing the previous linguistic experiences of JA and JP, it appeared that, at least

by their reported perceptions, JP felt more confident in her Spanish abilities based on her

past formal instruction. Although, JA had grown up speaking Spanish at home, she still perceived this experience to have potential disadvantages. In contrast, in JP's description of Spanish, she also described the potential for negative influence stemming from her experience in Italian. She expressed the idea of mixing the two languages. In addition, by comparing the students' initial perceptions with their perceptions later in the semester, this research found that the participants reported consisting feelings in this regard.

With respect to technology, being that most of the students began with similar experiences, there were no major variations in the perceived effects of these experiences. In addition, there were no major issues with technology throughout the research process. Only TD reported some reservation about using technology for the purpose of online language learning. TD had used computers since elementary school, and she reported being generally aware of most technologies. She had a favorable opinion of technology, but she stated in the background survey that it was "too early to judge" about the use of technology in this online class. She felt that she was capable with computers, but she was undecided about "anticipating having a little trouble with technology in this online course." From these two statements, it appeared that the student was aware of technologies, but also non-committal.

In regards to specific online learning experiences several of the students reported being familiar with and comfortable using online technologies to receive instruction and submit electronic assignments. In Excerpt 12 JA described how being familiar with Blackboard had the potential to help her in the online Spanish class, because it could help her to submit assignments without any trouble.

Excerpt 12. PHI_JA

Do you think that your previous experiences will help or hinder your success in this course? What makes you say that?
They definitely will help me, because I know how to use the tools in Blackboard to get to certain things that I need to turn things in to the class. I am very familiar with Blackboard.

From this description of JA's perceived benefits from past online courses, which was quite similar to the other participants, one can see that the student participants perceived their past online course experiences to be solely beneficial to their current learning situation. None of the students reported any negative perceptions in relation to the impact of their previous online courses.

In conclusion, the data collected in this investigation indicated that the students began the online Spanish course with varying perceptions of the impact of their previous experiences. This finding appeared appropriate because the students came into the course with unique backgrounds and social contexts. One would expect each individual to perceive these experiences and the influence of these experiences in diverging manners. It is important to note, however, that there were greater variations in their perceptions in relation to linguistic experiences as opposed to technology. This form of normalization with regard to technology did not appear to exist in relation to the participants' prior linguistic abilities with Spanish.

Research Question 2: Participants' Activity Systems

What is the nature of the online language learners' activity systems?

a. What is the nature of the online language learners' activity systems at the

   beginning of the course?

b. What changes, if any, occur in the learners' activity systems throughout the duration of the course?

This question focused on the online language learners' activity systems as they were defined after reviewing the data collected. The sub questions were intended to aid in establishing historicity in the research process, and they also focused on whether the students' activity systems changed throughout the duration of the course. To answer this question the data derived from the background survey, the personal history interview, the series of interviews and observations, the researcher journal, and the review of supplementary materials.

Within Activity Theory the activity system is the primary unit of analysis because it enables portraying, discussing, and interpreting human action. For the purpose of this research the central activity systems under investigation were those related to the student-specific activity of taking an online Spanish course at the university. These activity systems included the subject, the object and related outcomes, mediational tools and artifacts, the community or communities, the division of labor, and rules. Discussing the participants' activity systems and their components aids in understanding the intended activity, online language learning, and how each component played a role in this activity. In the following section, the participants' activity systems will be discussed in general, and then differences and similarities among the participants' systems will be highlighted. Last, this discussion will carry over to tracking changes in the activity systems over the period of the course.

Activity systems: Beginning of the course

Defining the participants' activity systems at the beginning of the course allowed for tracking the students throughout the research. To establish the students' initial activity systems the rubric contained in Appendix H was applied to the participants' background survey and personal history interview. This rubric allowed for identifying the components of the activity system by answering specific questions designed to highlight their defining characteristics. When the online Spanish course began, most of the participants began with similar activity systems. These initial activity systems appeared to be typical of college level students in an online Spanish course. For example, each student's activity system began with the same subject (the student participant), community (the university and course environment), division of labor (between the instructors and the students, established by the course procedures), and rules (established by the university, the language department, and the course procedures). Figure 9 is a graphic representation of two of the students' initial activity systems.

-EN LÍNEA based tools
-Online tools
-Dictionaries and textbooks
-Spanish language
-TAs and instructor

-Achieve (S)atisfactory grade
-Rehearse existing Spanish abilities for travel purposes

-Student participant (JP)

-Homework due dates
—Exam policies
Grading scale-

-Students
-Teaching assistants
-Instructor

-Students complete assignments, take exams
-Instructor and TAs grade assignments and exams, and offer feedback to students

-EN LÍNEA based tools
-Online tools
-Dictionaries and textbooks
-Spanish language
-TAs and instructor

-Achieve passing grade
-Fulfill language requirement

-Student participant (MD)

-Homework due dates
-Exam policies
-Grading scale

-Students
-Teaching assistants
-Instructor

-Students complete assignments, take exams
-Instructor and TAs grade assignments and exams, and offer feedback to students

Figure 9. Overview of students' initial activity systems

Within these activity systems the rules and policies most related to the course and student participation were uncovered in the review of supplementary materials. In general, the rules and policies outlined in the course syllabus governed homework deadlines and submission procedures, the taking of exams, etc. For a more in depth description of these rules, see Appendices J-Q. Although the majority of these rules and procedures were also discussed previously in chapter 3, these appendices highlighted and categorized them according to where they were presented with regards to course

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documents and websites. These rules and policies were found to be consistent for each student. The only exception to this was JP's case. JP registered for the course under the S/U option, which established a different grading scale for her overall grade in comparison with the other participants who were registered under the traditional grading scale. Ultimately, JP had to earn a grade of 70% or better to pass the course even though she would not receive credit for taking the course. Ultimately, this subtle change in the rules that applied to her learning context played an important role in shaping her learning process. This impact will be evidenced in the following sections.

The division of labor for the course was consistent for all of the student participants, and it was clearly defined for each student in the course syllabus. For more details refer to Appendix J. In short, the students were responsible for submitting online homework assignments, preparing for exams, and taking the exams as scheduled. On the other hand, the teaching assistants and the lead instructor for the course were primarily responsible for grading the online homework submissions and the student exams. See Appendices J-Q for a further description of how the division of labor for the course was outlined in related course documents.

Similarly, all of the participants began the course with access to the same mediational tools. Each student had equal access to EN LÍNEA and its available tools, as well as other Internet-based tools and resources. One variation to the students' beginning mediational tools was that some of the participants had varying ability levels in Spanish prior to taking the online course. For example, JP and JA began with intermediate to advanced abilities in Spanish. Others began with minimal experience and one student

began with no prior exposure. These different, linguistic ability levels modified the type

of mediational tool that Spanish was in the activity of online language learning. For

students with more experience, they were able to refer more to existing knowledge while

others with less experience relied more on other mediational tools to learn and search for

information.

Perhaps the largest variations in the student participants' beginning activity

systems came from the learners' objects and desired outcomes, which were expressed

prior to beginning the coursework. Several of the participants expressed their desire to

fulfill the foreign language requirement and to ultimately graduate. In fact, the majority

of the students who enroll in the beginning Spanish I online course do so to fulfill this

requirement. However, this object did not apply to all of the student participants in this

study. For example, JP, who was discussed previously in regards to registering under the

S/U option, desired to rehearse her existing knowledge of Spanish for a vacation trip to

Costa Rica in the following months. Excerpt 13 contains a description of JP's thought

process behind taking the online Spanish course.

Excerpt 13. PHI_JP

What are your goals for this course?
Well, it is, I am taking it S/U, so my goal is obviously to get the S. So, I am doing
much better than that though. Again, this is kind of a review for me. I needed to
get back into the language, because I have taken Spanish since 5 or 6 years ago.
So I only knew the basics, but I wanted to learn more obviously because I am
going to a Spanish country in the summer, so that's why I am taking it. Now that I
am into it, it is a lot easier. I mean I am getting like 95 for all of the assignments,
and I am not even doing every one of the assignments. I mean I am doing pretty
well. I think it is because I remember some things and stuff like that.
**Ok, but you would say that you are taking this course primarily to
refresh…?**
As a refresher primarily.

As one can see from her description, JP did not need to receive credit for the course to fulfill the foreign language requirement and ultimately graduate. Likewise, in Excerpt 14 RA described how she chose to take the course to build on existing knowledge from high school courses, not to fulfill the foreign language requirement. She also felt that learning Spanish may be a benefit in her future career.

> Excerpt 14. PHI_JA
>
> **What are your goals for this course?**
> I want to be able to get to a point where I can actually hold like a minor conversation, like the how do you do and introductions. I want to go to Puerto Rico because I have family there. My dad is thinking of dumping us there for like a month so we can learn the language, but I don't think if I don't have the background I won't be able to do that well enough and they will just laugh at me.
> **Are you taking this course to fulfill the foreign language requirement?**
> No. I am just taking it to learn it. I think that it may help me later in life, in my job.

These variations in learner objects ultimately helped shape the learners' activities by changing the manner in which the students worked online, their motivation levels, and goals for the course. This important finding will be discussed in more depth in the findings sections for research questions three and four.

Likewise, throughout the research process it became apparent that the students entered the course with varying social contexts. Although it was not a primary focus of this research to investigate the learners' interacting activity systems within online language learning, it is important to note these factors, which ultimately aided in shaping the online language learning experiences of the participants. For example, several of the students described work contexts, which impacted their participation in the online course.

In Excerpt 15 SS, who commuted from Atlanta, GA to Tampa, FL for the purpose of the

course, described her work context.

Excerpt 15. PHI_SS

Are you currently working in addition to taking classes?
Yes.
Could you describe your weekly schedule?
I work full time. I work the front desk for a cardiologist's practice. It's a really
large practice. I work from 8:30-5pm every day. I have a half hour lunch break.
And, I am pretty much nonstop answering phones, checking people in, making
appointments, that type of stuff.

Several of the student participants described situations similar to SS, in which they

worked full time Monday through Friday in addition to taking college courses. Based on

this type of work schedule many of the participants chose to work online primarily on the

weekends, as JA in Excerpt 16.

Excerpt 16. PHI_JA

Where will you complete the online materials?
I usually do it at home.
Why have you chosen to work there?
Because I really can't do it at work because of the fact that I am working. And I
would rather come home and do it then going to the school because I have my
own computer at home. And it's just convenient, a more relaxed environment.
When will you complete the online materials?
I will work mostly on the weekends, hopefully Saturday night and/or Sunday in
the afternoon.
Why have you chosen to work on that day(s) at that time(s) of day?
Mostly because I work full time during the week and I have other responsibilities
then also.
So you will be working primarily on the weekends?
Yes, on the weekends.
Why have you chosen to work on this schedule?
Due to my schedule.
Related to work and your other classes?
Yes.

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Students with this type of work schedule made a conscious decision to work primarily on

the weekends, when work would not be a distraction. Thus, they became somewhat of a

weekend participant in the online language course.

Aside from unique work contexts, one student in particular, RA, came into the

course with a unique home setting. Being a single parent and living in her parents' house

while taking the course, she relied heavily on the assistance of her parents in caring for

her son while completing coursework. In Excerpt 17 RA described how this affected her

schedule for completing the online coursework.

Excerpt 17. PHI_RA

Where will you complete the online materials?
I'll probably complete it at home.
Why have you chosen to work there?
Because I can watch my son and play with him and do my homework at the same
time as doing my work. So if he needs me to run up to the bathroom, I can do that
and then come back to the computer.
You said that you will typically do most of the homework on the weekends?
Yeah, I try to get some of it done at night. It's usually very late at night. If it's the
weekdays, it's more towards Thursday or Friday. Sometimes I work on
Wednesday. I do the partner assignments on Thursday or Friday, night or late
afternoon. And then I finish up any of the other sections that I couldn't get to
during the week. It's all during the weekend. My weekend is usually covered with
Spanish.
Why have you chosen to work on that type of schedule?
Basically, who is around the house. If no one is home, it is a little bit harder for
me to concentrate with my son around because he wants me to play with him all
the time. If no one is at home at all, then I have to wait until when he gets to bed,
then I can go work on it. I basically wait until he goes to bed. But then on the
weekends when more people are home, I can bounce between letting him play
with the family and playing with me. So I have more time to sit down and
concentrate on what I am doing. So, it works out.

In this manner, the idea of interacting activity systems also presented itself in the activity

of online language learning. Figure 12 illustrates how multiple subjects from separate

activities may collaborate towards achieving a potentially shared object. In this research

shared objects among student participants and other students and student participants and

their surrounding activities were that of successful completion of the online Spanish

class, graduation, good grades, prosperous home life, etc. However, by interacting with

other subjects and their activity systems, the learners also experienced changes in

schedules and personal priorities. Thus, it was found that the students experienced

interactivity between multiple activities from outside and inside the central activity

system, that of the course itself.
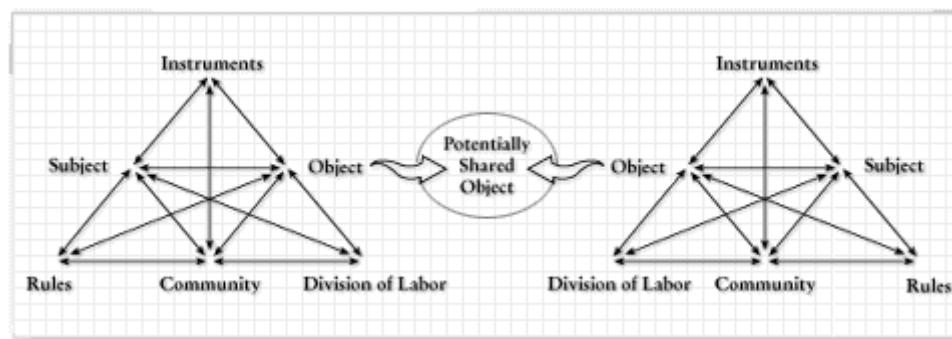
Figure 10. Overview of interacting activity systems

Changes in activity systems

Beginning activity systems, as just discussed served as the starting point for

tracking the subsequent changes where relevant. To track changes in the participants'

activity systems, all of the data collected were reviewed in order to gain insight into each

student's path through the course. First, the personal history interviews and the

background surveys were reviewed to establish the participants' baseline activity system

prior to beginning the course. Then, during the sixth week of data collection the data

collected were reviewed in order to establish the second set of activity systems. Upon

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completion of the twelfth week of the data collection process a third set of activity systems was created. In this manner, snapshots were used to create an analytic structure using time intervals to segment the overall activity. Here, these sets of activity systems will be discussed in relation to noted changes, and in the following sections these changes will be discussed in relation to the students' contradictions and overall development.

To establish the coding scheme for changes in the participants' activity systems, the sets of activity systems were coded in their entirety for two participants, one beginning level student and one intermediate level student. This allowed the coding scheme to emerge from the data rather than imposing an existing coding scheme to the data, which may prevent unveiling new potential themes. From this, the lead researcher and the co-rater established 3 codes for representing the types of changes noted. Table 12 provides an overview of these codes. Subsequently, these codes are explained in more detail with examples from the data.

Table 12

Overview of the Coding Scheme for Changes in Activity Systems

Code used	Description	Change exhibited
CMEDT	Student changed manner in which a mediational tool was used for online learning	Change in use of mediational tool
COBJ	Student's overall purpose or goal for the course changed	Change in object
INAS	A separate activity system was introduced into the student's activity system for online language learning	Introduction of new interacting activity systems

As the course and the research process progressed noticeable differences between the participants' activity systems began to emerge. It is understood that many changes occurred as the components of the activity evolved; however, the purpose here is to address the most significant changes in the students' activity systems: the participants' use of certain mediational tools, the activity's object, and the introduction of new interacting activity systems. In the following sections these changes will be discussed; however, it is also important to note components of the student participants' activity systems that did not change throughout the course. To substantiate that there were components of the students' activity systems that remained constant throughout the course, each activity system established for the participants, three per student at 3 distinct points in time, was compared and contrasted. Whereas this process of constant comparison allowed for identifying the changes, it also highlighted the constancies. In the following sections, where appropriate, these constancies in the students' activity systems will be discussed to provide counterexamples to the observed changes in other' activity systems.

Change in the use of a mediational tool

Students who exhibited a change in the use of a mediational tool demonstrated varying actions with the same tool throughout the research process. The most predominant change in the use of a mediational tool came in relation to using an online translator. Several students, like MD, used an online translator to assist with finding the meaning of words or phrases while working through the online exercises. In the first interview MD described her use of online translators as being "convenient". Later in the

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research process, during the second interview, she discussed the online translators again.

Excerpt 18 contains her description.

Excerpt 18. INT2_MD

Are there any online tools that you use frequently? Why do you use these more?
Not frequently, no. Like I said before, there have been some English-Spanish translators. But I have gotten some feedback about that before. Like the first couple of lessons that it is totally different. So I just stick with the online book. I only used them for the first two lessons. I wanted to just double check myself, but the TA said that she could tell that I had used a translator. She said it's just not the same.

As described, one of the teaching assistants advised her that some of her writing submissions contained very literal translations instead of meaningful phrases. It was at this moment in her online language learning that she decided to cease using the online translator. It was as if she recognized that she was relying too heavily on the translator to comprehend words and phrases. Thus, with the influence of a teaching assistant, a community influence, she was able to adjust her mediational tool use in the activity of online language learning. As she came to this realization and made the change deemed necessary, there was also a subtle impact on the rest of her activity system. For example, her interaction with the teaching assistant ceased and she expressed feeling more confident about trusting herself in the process of completing the work. Last, when considering MD's decision to change her use of the online translators, it is important to remember her desired outcome of learning Spanish for the potential of using it in a future workplace. Thus, there was interactivity between her use of mediational tools and her expressed desired outcome for the course as well.

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A counter example to this type of change in the use of a mediational tool occurred with TD. She also admitted to using and was observed using online translators while completing the online exercises. However, TD consistently used the online translators throughout the course, even though she described its potential for decreasing her overall abilities with the language, "It is probably an easier way out, but I do it to get the work done. I know it hurts me on the exams because I don't have the translator then. I just blank out." This over reliance on the online translators ultimately changed the activity for her by preventing knowledge retention for the exams. In this case TD's desire to simply pass the course and fulfill the requirement appeared to cause tension with the division of labor component and mediational tools within the activity system. This apparent conflict in the decision making process of TD will also be discussed later in relation to contradictions and disturbances in the results section for question four.

Change in object

Students who exhibited a change in object also demonstrated varying motivations for completing the activity of online language learning. The most apparent change in object came in relation to JP's change in attitude towards the course and her overall goals. Thus, she exhibited a noticeable change in desired outcome and object. For example, as discussed previously JP began the course desiring to refresh her existing abilities in Spanish to prepare for a summer trip to Costa Rica. However, as the course progressed her attitude shifted towards simply wanting to complete the course having earned the minimum grade required to receive the (S) or the satisfactory mark. Figure 11 contains an example activity system created from the data collected. As Figure 11

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displays, there was a marked change in JP's overall object for the course from week one to week twelve of the research process. This was also evidenced in Excerpt 19.

Excerpt 19. INT3_JP

Have you gained confidence in your Spanish abilities?
Kind of, it has shown me that I do remember a lot of my Spanish.
Do you feel that you accomplished what you set out to do in this course?
I don't know. I did review a bit, but most of the time I felt like I was wasting my time. I probably would say that I regret taking this course, because it was more of a hassle than anything. Towards the end I didn't even care about learning or reviewing Spanish, I just wanted to finish the assignments and be done.

JP's work changed so drastically throughout the course that at one point she did not submit a week's lesson and then she did not appear to take the exam, resulting in a loss of 22% points for the overall grade in the course. However, as discussed previously this was more acceptable to her than other students based on her S/U status for the course. Thus, she had more flexibility in her grade scale.
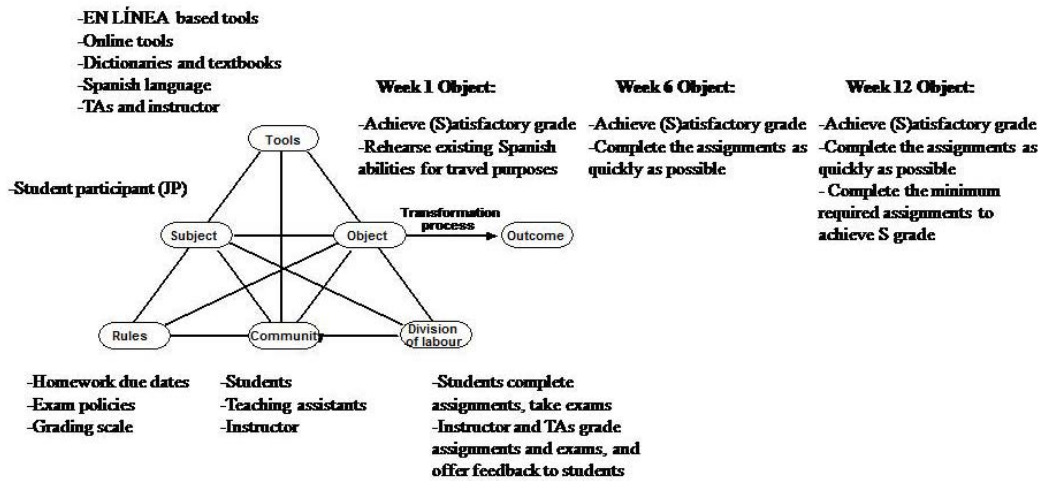

Figure 11. Overview of change of object in student's activity system

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JP's manner of working was in direct contrast of KG who spent a considerable amount of time on each task for every portion of the course. JP, most likely due to her prior knowledge of Spanish, understood most of the material without reviewing the tutorials and she progressed quickly through each lesson. On the other hand, KG was very detail-oriented and she displayed meticulous review before submitting each assignment online. KG's object did not change throughout the duration of the course. She desired to learn Spanish and to fulfill the language requirement. Thus, her method of completing and submitting the coursework did not change either.

Introduction of new interacting activity systems

There were several student participants who introduced new interacting activity systems into their activity of online language learning. As discussed previously, several students began the online Spanish course with existing, interacting activity systems, which ultimately impacted their online language learning. These included that of their work and social contexts. The introduction of new interacting activity systems was accomplished primarily by soliciting the help of a family member or classmate. For example, JA admitted to soliciting the help of her fiancée to complete the online exercises, a native speaker of Spanish. Thus, the students' interacting activity systems of academic coursework and home life began to interact in the process of completing the online language course. This also resulted in several shared objects between JA and her fiancée, that of successfully completing the online work, learning Spanish, and maintaining a happy relationship and home life.

Likewise, two students in the online course, KG and RA, began working together to complete assignments. They collaborated primarily to complete online recordings and collaborative dialogues. It did alter the division of labor between the two student participants as they completed online exercises together. When asked about this KG discussed equally dividing the assigned work for such sections. This description is contained in Excerpt 20.

Excerpt 20. INT2_KG

How do you select a partner to work with for recordings? How do you then decide when to work together?
I have the same partner all the time. We prearranged that way back with chapter two. We had to get a schedule that worked for both of us. This way we know when we meet and we just divide up the work and combine it together when we are done. And if either of us have any questions we could just ask each other.

Her description also referred to the additional resource afforded by working with another classmate collaboratively. Thus, by introducing an interacting activity system, in this case one that shares the same object of successfully completing the task and learning Spanish, the students also gained access to another mediational resource. Last, these two students began working in the online course confined in the immediate context of their individual activity systems; however, after deciding to work collaboratively with a fellow classmate each merged her respective system with the other's system.

Research Question 3: Mediational Tools

What is the nature of the mediational tools used by the learners?

    a.   What types of mediational tools are used by the online language learners?

    b.   How are these mediational tools used to enable online learning?

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This question focused on the types of mediational tools used in the online Spanish course. Although mediational tools include the psychological, such as language, and the physical, such as textbooks, the focus for this research was on physical mediational artifacts, in particular the technology-based artifacts such as the computer. It was also intended to determine how the tools are used towards reaching the learning outcome desired. To answer this question the data derived principally from the observations and the individual interviews.

Within Sociocultural Theory and Activity Theory mediation and mediational tools are principal concepts. Mediation presents the idea that all human activity is affected or controlled by artifacts or tools, which are used for completing the activity. Furthermore, mediational tools enable the individual to exhibit control over the activity, the world as a whole, and the self. These tools can be psychological, as in language or diagrams, or physical, as in books or computers. With respect to online language learning, the students are attempting to learn to communicate in a second language while simultaneously attempting to acquire a new mediational tool, the second language itself. Yet, in the online setting, the computer and its related tools are equally as important, if not more important considering the lack of the instructor's physical presence.

For the purpose of this study, which was embedded in the broader field of online language learning, the focus was solely on the physical tool use, especially the computer. This limitation was not intended to underestimate the relevance or importance of language and other psychological tools in online language learning. However, it was intended to aid in revealing the role of the computer in online language learning and

avoid the duality of language as tool and language as context. This focus on the computer as a mediational artifact allowed the researcher to investigate how the activity of online language learning was changed by the role of the computer. The use of these computer-based tools will be discussed in the following section, which is followed by a discussion of the mediational tools used not related to computers.

Physical tool use: Computer-based tools

To establish the coding scheme for mediational tool use in this study, two sets of the data were coded in their entirety. The two sets chosen were selected to be representative of a beginning level student and an intermediate level student. As mentioned previously, Strauss & Corbin (1998), describe how this allows themes to emerge from the data rather than imposing an existing coding scheme to the data. From this, the lead researcher and the co-rater established 7 codes for physical tools. Table 13 provides an overview of these codes. Subsequently, these codes are explained in more detail with examples from the data.

Table 13

Overview of the coding scheme for physical tool use

Code used	Description	Behavior exhibited
ELD	EN LÍNEA Dictionary	Students referred to dictionary to find meaning for Spanish words or phrases.
ELTXT	EN LÍNEA Textbook Pages	Students referred to textbook pages to review information presented.
ELTTL	EN LÍNEA Animated Tutorial	Students viewed the animated tutorial as a means of learning and reviewing information.
ELATB	EN LÍNEA Accent Tool Bar	Students used accent tool bar to type text.
NELD	Non EN LÍNEA Dictionary	Students referred to dictionary to find meaning for Spanish words or phrases.
NELT	Non EN LÍNEA Translator	Students referred to online translator to find meaning for Spanish words or phrases and to translate Spanish-English/English-Spanish words or phrases.
NCBR	Non Computer-Based Resource	Students referred to other resources to gather, store, and review information.

ELD: EN LÍNEA dictionary

Students referred to the dictionary built into the EN LÍNEA courseware to find

the meanings of unknown or unfamiliar words or phrases. All of the students that

participated in the research referred to the EN LÍNEA dictionary at multiple points in the

process of their online language learning. There were, however, variations in the manner

by which the students used the dictionary. Some students used it sparingly. In Excerpt 21,

MD described her thought process behind deciding to use the online dictionary.

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Excerpt 21. INT1_MD

During the observation I noticed that you use the EN LÍNEA dictionary to look up words. Could you explain this process?
Some times when I am working on something that I have never seen before and obviously this is one of those things. I will read over something and unless I am like studying it, it kind of just leaves my head. So when I get to certain parts of the lesson that I know I have seen before but I don't remember what it means the dictionary helps me a lot. And I use it to remind myself oh that is what it means.

From MD's description one can see that she elected to use the dictionary when word meanings escaped her. Others used the EN LÍNEA dictionary extensively throughout the online learning process. For example, when asked about useful online tools in the first interview, SS reported "I use the dictionary a lot." During the second interview she was asked about finding the meaning of words or phrases that are difficult to understand and she indicated, "I mean I used the dictionary and translator a lot. I wished that I didn't have to so much, but I had to."

From these two examples, it can be seen that the students used the dictionary to enable them to move past their lack of knowledge for a particular word or phrase. In this manner, throughout the research process it became evident that some students exhibited an over reliance on the dictionary to complete many of the online assignments. For example, at one point MD was reading through an assignment when she came across the Spanish word "idea". She struggled with the meaning of this word and then decided to look it up in the EN LÍNEA dictionary. Excerpt 22 contains her explanation for this occurrence.

Excerpt 22. INT1_MD

During the observation I noticed that you looked up "idea" in the dictionary, and then you said, "Sometimes I am just like oh!" Could you describe your thought process behind this event?
Like I said before, sometimes I am just like ok fine. Then 15 minutes later I will forget. But like that I looked it up and I had just seen the word, and I was just like oh duh. That was just dumb. And there was no accent mark?
No.
I was definitely over thinking it I guess. Maybe I was trying too hard.

In this example it appeared that MD relied too heavily on the dictionary, rather than thinking through the sentence and deciphering the meaning of a word that should have relayed its meaning rather easily. Although the dictionary did seem to enable MD's progress in relation to this word, having obtained the necessary meaning, the availability of the dictionary also seemed to impede the flow of her work. This potential for conflict will be discussed later in the results section for question #4.

Another pattern that became apparent in the students' behavior related to the EN LÍNEA dictionary was toggling back and forth between open windows on the computer screen. While working online in a particular activity several of the students chose to have multiple windows open simultaneously so that they could access the online resources in EN LÍNEA while completing the exercises. This use of multiple windows seemed to allow the students to multitask, using the reference materials to assist in completing the assignments. Figure 15 is a screen shot taken from RA's field observation#1. In this screen shot, RA was reading through the exercise questions. When she came to number 8 she did not recognize or remember the word *sobrinos*, so she referred to the EN LÍNEA dictionary by clicking on the dictionary tab at the top of her screen. She then maintained

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both windows open to enable finding the meaning of the word and applying this information directly to the opened exercise window.
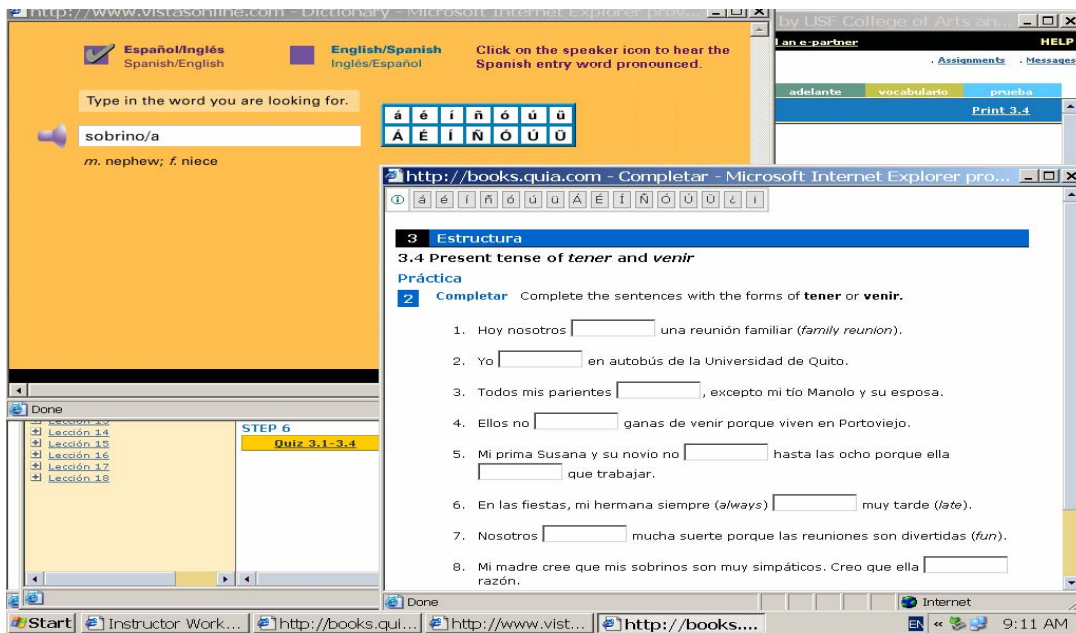
Figure 12. Toggling between open windows

Because this form of toggling back and forth between multiple open windows was employed frequently by several of the student participants and with a variety of the electronic tools available in EN LÍNEA and online, this discussion will not be repeated in the subsequent sections of this chapter. It is understood that the behavior was similar in each case and with the multiple electronic tools available.

ELTXT: EN LÍNEA textbook pages

Students referred to the online textbook pages presented in the EN LÍNEA courseware. All of the students that participated in the research reviewed the EN LÍNEA textbook pages at multiple points in the process of their online language learning. Many reviewed the pages during the initial stages of each lesson as a form of learning the

material in addition to viewing the online tutorials. Other students described the use of

the online textbook pages as a quick resource for reviewing key grammatical information

while completing the online exercises. These descriptions demonstrated that the students

referred to the online textbook pages as a learning resource and also as a source for

immediate access to reference information.

ELTTL: EN LÍNEA animated tutorials

Students referred to the animated tutorials in the EN LÍNEA courseware primarily

to learn new information in each chapter. These tutorials appeared to serve as the main

source of learning new information in lieu of not having an instructor who would

normally teach new material to the class. Without the presence of a more capable peer to

scaffold learning, which would be the normal case in a face-to-face setting, the students

referred to electronic resources to make up for this variation. All of the students that

participated in the research reviewed the tutorials at the onset of beginning each lesson.

For example, Excerpt 23 contains SS's description of her decision to review the animated

tutorials.

Excerpt 23. INT1_S:

Do you feel that you tried to learn the material before starting an exercise or do you start the exercise and then learn the material as you go to complete the sections? Why did you choose to work in this manner?
I don't know if I learned the material first, but I always watched the Tutorials and did the practice exercises before starting the homework sections. I figured you had to at least look at these before trying the work. I can't imagine starting the real work without trying to know something first, unless you already know Spanish, but then why would you be in this class anyways?

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From SS's description, one can see that for a student who had limited knowledge of

Spanish, reviewing the tutorials is essential for learning new information prior to

completing the coursework. However, for students who may have had some existing

knowledge, it was possible to advance to completing the exercises without reviewing the

tutorials. Thus, as referenced previously in the findings section for question one, the

students' previous experiences framed their subsequent selection of mediational tool

usage. For example, in Excerpt 24 MD described completing exercises by memory if she

did not have sufficient time to review all of the animated tutorials.

Excerpt 24. INT1_MD

Do you feel that you try to learn the material before starting an exercise or do you start the exercise and then learn the material as you go to complete the sections? Why have you chosen to work in this manner?
Hmm, to be completely honest, when I first start working on the lessons I will start listening to the tutorials, I will copy down the vocabulary, and I will really try to retain the stuff before I start working on the exercise. If I am on a time constraint then I will just open the exercise and I will try to do it by memory. That's the only time I will do that is if I am on a time constraint. I will just do the exercise and skip the tutorials.

Both examples here demonstrated how the students utilized the tutorials to assist in

learning new information at the beginning of each lesson.

The last pattern observed in relation to the participants' use of the animated

tutorials was that of reverting back to the tutorials while completing individual exercises

online. This was done to clarify certain grammatical and vocabulary related issues. It was

also done to review and reinforce knowledge while working in the exercises. RA

described this, "I do all the tutorials first. I look at them to get the gist of what's going on.

Then I start. If I don't get it then I will go back to the tutorial."

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ELATB: EN LÍNEA accent tool bar

Students reported using and were observed using the accent tool bar, which is located in the EN LÍNEA courseware, to enter accent marks in their responses to the lessons' exercises. The accent tool bar in EN LÍNEA, see Figure 13, floated on screen as the students progressed down each activity page. All of the students that participated in the research used this tool to mediate their foreign language writing. Although there were other options for inserting accent marks in the text required for the lessons, such as Ctrl+Alt commands, none of the students used an alternative method of inserting accents. This was most likely due to the accessible placement and convenience. When asked about using the accent tool bar, RA replied, "It helps a lot. I always click on that." Similarly, JA described its convenience, "It works really good. It was very useful. I didn't have to figure out how to make the accents on the keyboard. You just click on it and it just pops up automatically." From these descriptions it became apparent that the students used the accent tool bar for easy access to insert accents. In this manner the tool bar allowed the students to type special characters without disrupting the flow of working online.

Figure 13. EN LÍNEA Accent Tool Bar

NELD: Non EN LÍNEA dictionary

Several of the participants used an electronic dictionary that was not related to the EN LÍNEA courseware. It appeared that the students chose to use an outside dictionary resource based on their perception of the EN LÍNEA dictionary as having limited vocabulary. At several points in the research process it was noted that the students were unable to find particular word meanings in the EN LÍNEA dictionary, and as a result they referred to external, online dictionaries such as WordReference.com (See Figure 14). For example, at one point SS looked in the EN LÍNEA dictionary for "surfing" and did not find the meaning. She then looked in an online dictionary and found the meaning. In this manner the external, online dictionaries allowed the students to progress in their online work by providing the meanings for difficult words or phrases. However, it also appeared to make up for perceived deficiencies in the existing, EN LÍNEA dictionary, which primarily contained words and phrases presented in the EN LÍNEA materials.

Figure 14. Online dictionary screen shot

NELT: Non EN LÍNEA *translator*

Several of the participants used an online translator that was not related to the EN

LÍNEA courseware. The online translators, similar to online dictionaries, provided

meanings for words and phrases. However, translators also had the capability of

translating complete blocks of text from English to Spanish and Spanish to English. Only

two participants of this study reported using online translators, MD and TD. MD reported

using an online translator; however, she was never observed doing so. On the other hand,

TD used an online translator extensively while completing the online assignments, and

she was observed doing so numerous times. TD was the only participant who was

observed using an online translator to assist in completing the exercises. Excerpt 25

contains her description of using the online translator, FreeTranslation.com, when asked

after a field observation.

Excerpt 25. INT1_TD

**During the first observation I noticed that you use the Using
FreeTranslation.com site, could you describe your thought process behind
this?**
Hmm, I believe that I couldn't actually understand the questions so I just put the
words into the translator. It makes it more clear to me. I can actually put in the
sentences and it gives me the English. I cut and paste the sentences.
**How do you think that using the translator affects how you learn the
material?**
It is probably an easier way out, but I do it to get the work done. I know it hurts
me on the exams because I don't have the translator then. I just blank out.

In this Excerpt TD described how using the online translator made completing the

exercises easier by clarifying the directions and questions of particular exercises. In line#

she described how she cut and pasted sentences into the translator; however, in the field

observations she was observed cutting and pasting entire sections into the translator,

including her English responses, and then cutting and pasting the subsequent translations as her ultimate submissions. Ironically, she admitted that this may be an easy way out, and that it had the potential to impede her learning for the purpose of the exams, yet she continued to rely heavily on the translators for the purpose of completing the online exercises. Figure 15 is a screen shot of one of the online translators commonly used by TD.
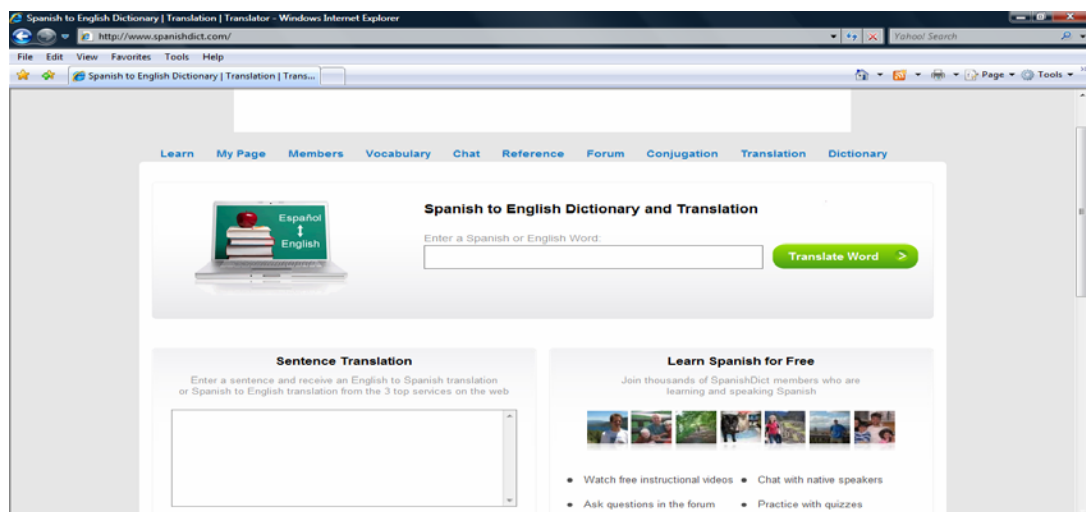
Figure 15. Online translator screen shot

Physical tool use: Non computer-based resources (NCBR)

Throughout the completion of the online course, the students used several mediational tools, which were not associated with EN LÍNEA or computers in general. This section will describe these non computer-based resources and their relevancy to online language learning. The tools discussed here include physical textbooks and dictionaries, flashcards, notebooks, and even another person.

First, although the coursework and materials for the online course were available

and presented entirely online, the students also had the option of purchasing a companion

textbook. Many of the students chose to purchase this textbook to use it as a reference

much like the online materials. For example, in Excerpt 26 RA discussed how she used

the textbook while simultaneously completing the online exercises.

Excerpt 26. INT1_RA

When you are working online how do you decide between using the physical text or an electronic resource online?
I usually just like use whatever is convenient. If it's easy to just shift the pages online, I will do that. Some times it is easier to just look in the book and keep the same window open.

Similarly, some of the students worked online with a textbook in their lap or at their side

on the computer desk. This appeared to help them maintain their place online without

having to worry about accidentally shutting an open window. Likewise, several students

utilized a physical dictionary. KG described this in Excerpt 27.

Excerpt 27. INT2_KG

Do you feel that you are capable of finding the meanings of words or phrases that are difficult? What makes you say that? How do you go about doing this?
I do think I am capable. I have a dictionary. Normally the first thing that I do is look at the words and toy with the way it should read in English. Then I will just go look it up to see what it means. I usually use a dictionary.

In this example KG referred to using a physical dictionary, even though there was an

online dictionary available in EN LÍNEA and other Internet-based dictionaries available.

Aside from textbooks and dictionaries, one student consistently used a notebook to record and rehearse information from the online lessons. In Excerpt 28 JP described how using a notebook made accessing recorded information easier later in the lesson.

Excerpt 28. INT1_JP

During the first observation I noticed that you had a notebook with you? Could you describe how you use this while completing the online work? Some times if I think something is important to remember I will write it down. I like to write it so I remember it better. Then I don't have to go looking for it later.

In this manner JP used the notebook to record salient pieces of information, which she deemed important and potentially useful for her work to come. Likewise, MD described using flash cards to accomplish a similar purpose; however, she also described how this made her learning more portable, "Yeah, it is mainly for vocabulary. And then when I go out I just bring the cards with me and if I have to wait some where I will use them." It seemed that by creating flash cards, which can be taken away from the computer, MD was then able to rehearse learning in other environments. As a result she was no longer restricted to sitting at the computer in order to learn and practice Spanish.

The last non computer-based resource used as a mediational tool in this investigation was that of a more capable peer. In Excerpt 29 JA described that she had her fiancée, who is a native speaker, to refer to for help with completing the lessons.

Excerpt 29. INT1_JA

Have you felt that the material in this course has been too easy? No, I think that it is teaching me a lot, because I don't really know the grammar. It is actually pretty hard for me, and again I have my fiancée who helps me so it must be hard for other students. I have a lot to learn.

Throughout the research process it was noted that JA used her fiancée for partnered recordings and as a resource for information much like others would refer to the online materials and tools for assistance. Here, it is also important to note that none of the student participants initiated contact with the instructor during the course. It is difficult to determine if this was a side effect of the research process or if it was simply a natural occurrence for the course. Individual face-to-face contact between the instructor and a student is typically infrequent in this online course.

In conclusion, throughout the course and the completion of the online exercises many of the students referred to both computer-based and non computer-based resources tools. The EN LÍNEA and online tools appeared to provide immediate access to information that was necessary for the completion of the online coursework. Where the EN LÍNEA tools seemed inadequate to the students, they searched online for other tools such as online dictionaries and translators. However, not all of the students' needs were met by the technology-based tools. Thus, many of the students used physical tools other than computer-based. These tools such as textbooks, flashcards and notebooks afforded the students resources for off line practice and study away from computer. This form of portability was deemed important by several of the student participants.

Research Question 4: Contradictions and Disturbances

What is the nature of the contradictions and disturbances that arise in online language learning?

   a. What types of contradictions and disturbances arise in online language learning?

b. If possible, how are the learners able to resolve these contradictions as they

occur?

This question focused on the types of contradictions and disturbances encountered

by the students in their online language learning. It was also intended to determine

whether the students were able to resolve these contradictions as they occurred and how

this shaped their future development. To answer this question the data derived principally

from the observations and the individual interviews; however, all data collected were

considered for the purpose of describing the students' activity systems.

Within Activity Theory contradictions are considered the driving force behind

human development. Contradictions are considered long term, internal tensions, which

exist within the elements of each individual activity (subject, instruments, object, division

of labor, community, and rules), between these elements, and between surrounding

activity systems. These contradictions were identified by applying the rubric contained in

Appendix G, see p. 259, which was designed to unveil the defining characteristics based

on descriptions of tendencies leading to contradictions and disturbances. There is,

however, an important difference between contradictions and disturbances. Disturbances

are generally considered as deviations from the normal flow of work and they can be tied

to underlying contradictions of the activity systems. They are the visible manifestations

of contradictions (Capper & Williams, 2004). Disturbances occur between people and

their instruments or between two or more people. In the following sections there is a

discussion of the contradictions and disturbances, which were encountered in this

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research process. This is followed by a description of how these contradictions were resolved when possible.

<div align="center">*Types of contradictions and disturbances*</div>

This study found three salient levels of contradictions. For the purpose of this research, the levels of contradictions observed and identified in the data were classified as conflicting-object contradictions, inter-activity contradictions, and technology-related contradictions. Although these contradictions coincided with the traditional categories of contradictions within Activity Theory (primary, secondary, etc.), it was deemed useful to further classify the contradictions according to their immediate impact in the activity system. These more specific descriptions also allow the reader to see and understand the type of contradiction more readily. Thus, the following sections will discuss these three levels of contradictions and the related disturbances, which contributed to their formation in the semester long activity of online language learning.

Conflicting-object contradictions

Conflicting-object contradictions refer to tensions which emerged as clashes of interest between two or more objects within the same activity. In Activity Theory terminology these are referred to as tertiary contradictions. Tertiary contradictions take place only at the object node of the activity system when a more advanced activity, or a more advanced form of the same activity, introduces a new object into the central activity system. Then, this new object may create disagreement and clashes of interest, which is the result of tertiary contradictions. Throughout this research process one conflicting-object contradiction was identified.

As noted in the discussion section for question two, through the data collected it became apparent that JP experienced a change in object. Before this change was actually made, a contradiction steadily emerged in her online language learning. It is important to remember that originally JP wanted to take the course to rehearse her existing knowledge of Spanish to prepare for a trip to Costa Rica. Based on her previous experience with Spanish, one would expect her to begin at a higher level than Spanish I; however, she took the department's placement exam and placed into Spanish I. Upon discussing her decision to enroll in the course, the instructor notified her that based on her experience she had to take the course under the S/U grading option. This allowed JP to enroll in the course, yet she did not receive academic credit for the course or receive GPA points based on her final grade. She would simply pass (S) or fail (U) the course depending on her performance.

After several weeks in the course, JP felt as if it were taking too long to complete the online exercises. In several interview questions she described how she felt rushed to complete the assignments, because she was frustrated about "the amount of time that it takes to complete the work online." She even stated that she "(I) shouldn't have taken this course because it is more work for me." As a result of this frustration she began to take shortcuts to complete them. For example, she did not review the tutorials which presented the information pertinent to the lesson, and she submitted many of the assignments only once, regardless of the grade she earned in the initial submission. Later in the semester she chose not to submit a lesson's work and she also chose not to attend one of the exams. However, through these disturbances in her coursework a contradiction became

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apparent between her desire to rehearse existing Spanish and the division of labor requirements established by the rules and procedures of the course.

By the end of the semester she was noticeably conflicted between two or more different goals related to the same activity of online language learning. Her first goal, which was explicitly stated by JP, was to review her existing Spanish. The second goal, which only became apparent through subsequent interviews and observations with JP, was to spend a relatively small amount of time participating in the actual course. These two objects ultimately created tension and they resulted in a conflicting-object contradiction. This type of contradiction served to highlight the fact that students may have multiple objects or motivating forces behind participating in an online language learning course, and at times these objects may conflict with each other.

Inter-activity contradictions

Inter-activity contradictions, known as quaternary contradictions in Activity Theory, refer to tensions which emerge between the central activity and any surrounding activity. This type of contradiction may occur as a problem, a rupture of communication, or an obstacle that interrupts the fluent flow of work. These obstacles are the result of quaternary contradictions. Throughout this research process two inter-activity contradictions were identified.

First, it is important to remember that any one subject can be a participant in multiple activities simultaneously, both inside and outside the online structures. The focus here is on contradictions between the central activity and outside activities. In this study it was noted that several students had to balance academic, home, and work lives at

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the same time. Through the data collected it became apparent that different students

engaged in the activity of online language learning and other miscellaneous activities at

distinct levels, and that the activity of focus, online language learning, did not progress as

well as some had hoped due to tensions between the course and other various activity

systems. For example, RA and SS experienced this type of contradiction. The premise

behind their contradictions was that each was a participant of multiple activity systems

simultaneously, which were forced to interact with one another based on overlapping

responsibilities. Thus, these two students in particular experienced contradictions

triggered by the interplay between their academic activity of online language learning and

their home and work related activity systems.

First, RA described encountering constant interference from her family, which

stalled her completion of the online coursework. Subsequently, she was observed at

several points in the field observations when her son distracted her while she was

completing the online exercises. This left her with a dilemma with regards to when to

complete the online exercises and, when doing so, how to simultaneously meet the home

and work responsibilities required of her. When asked what was most challenging about

the course, she replied that "it was difficult to balance everything in my life. I took the

course online to have more freedom, but sometimes I just can't be mom and get my work

done at the same time." This tension indicated a contradiction between the multiple

activities in which RA was participating while taking the online Spanish course.

Second, SS encountered similar problems of interference caused by her home life

and work responsibilities. While taking the online Spanish course she was also working

full time, planning a wedding, and commuting from Atlanta, GA to Tampa, FL for the purpose of taking the course. When asked how her job affects her participation in the course, she replied that "it affects it a lot, especially because I live in Atlanta. I work full time so the course is not really my main priority, even though I need it to graduate." Per her account of work and home life, she had too much to do outside of the Spanish course. This ultimately made preparing for the course and completing the online assignment less of a priority. Even though successfully completing the course was a requirement for her graduation, the other responsibilities gradually consumed the time that was normally spent preparing for the course.

In conclusion, these two inter-activity contradictions served to highlight the fact that the online language learners were participating simultaneously in several activities. As a result of multiple ongoing activities within and outside of the course there is always a potential for conflict between them. In these cases the students' additional activities had a direct impact on the central activity of online language learning. This further demonstrated that learners do not act in isolation as they attempt to learn languages, whether it be in the traditional classroom or online. Outside activities have the potential to interact and interfere with the central activity of online language learning.

Technology-related contradictions

Technology-related contradictions refer to tensions that emerged as a result of using a particular technology in the process of completing the activity. In Activity Theory this type of contradiction is referred to as a primary contradiction, one that occurs within any of the six elements of the activity, or a secondary contradiction, one that occurs

between the six elements of the activity. Throughout this research process two technology-related contradictions and several disturbances caused by non-working technologies were identified.

Through the data collected it became apparent that MD and TD experienced technology-related contradictions. In both cases the students appeared to display an over reliance on the use of online translators while completing the online exercises. They each used an online translator to come up with and determine the meaning of unknown words and phrases. In Excerpt 30 TD described her thought process behind using the online translators.

Excerpt 30. INT1_TD

During the first observation I noticed that you use the Using FreeTranslation.com site, could you describe your thought process behind this?
Hmm, I believe that I couldn't actually understand the questions so I just put the words into the translator. It makes it more clear to me. I can actually put in the sentences and it gives me the English. I cut and paste the sentences.

As described TD cut and pasted entire sentences into the online translators to get an immediate translation. In addition, in the field observations TD was observed using the online translators to translate her writing assignments from English to Spanish before submitting them online.

Although this type of shortcut in the work process may be viewed as a productive method in terms of TD's object for the course, fulfilling the language requirement, it became apparent that TD and other students could not distinguish between beneficial use of the translators and over reliance on the translators. This type of technology-related

contradiction served to indicate that technology within the activity system may serve as an obstacle to language learning. For these students it was about determining sufficient and appropriate levels of usage for the online translator, learning how to maximize the benefit of its use while still enabling successful learning and retention of the information.

In addition to these contradictions, the most commonplace disturbances observed in the activity of online language learning of this research process were caused by non-working technologies. At various points in completing the online coursework, several students encountered problems with the technology-based tools. JP first described a problem that she had continuously with the EN LÍNEA dictionary, "Well sometimes the EN LÍNEA dictionary doesn't open for me, and that is a real pain." Similarly, JA encountered a problem with accessing the animated tutorials at the beginning of the lessons. This appeared to stall or prevent her progress in that particular lesson. She was essentially unable to proceed in the lesson until she rectified the problem. Thus, although these electronic tools had the potential to serve as powerful, mediational tools as described previously, they also had the potential to create additional obstacles in the process of online language learning. Experiencing problems with non-working technologies is especially problematic in an online course in which the students depend on these technologies for successful participation.

Resolution of contradictions

As contradictions are considered the driving force behind development, the resolution of such contradictions is equally important. However, before considering the resolution of the contradictions, as just defined in the previous section, it is important to

highlight the students' desired outcomes for the online Spanish course. These desired outcomes varied for the students based on their attitudes and motivation towards course and their overall goals. It is important to remember that the outcome is the result actually obtained upon completion. This outcome is not predetermined, and it is the transformational process, which includes the handling of contradictions, which enables turning the object into the desired outcome. Some students in this research were successful in achieving this, others were not.

In this research whether the student became aware of the contradiction and how this impacted their behavior was an integral part of determining their ability to successfully resolve the contradictions encountered. Having said this, in several cases even possessing the ability to recognize the contradictions that existed was not sufficient for resolving conflicts. With this in mind the following sections discuss the findings related to the students' resolution of contradictions, keeping in mind their desired outcomes for the course.

Successful resolution of contradictions

MD resolved her technology-related contradiction with online translator by stopping its use. She was able to resolve the contradiction after one of the teaching assistants brought her reliance on the online translators to her attention. At this time she made a conscious decision to shift the nature of her mediational tool use. Subsequently, by no longer using the online translators, she increased her motivation to actually learn Spanish by applying herself differently. Excerpt 31 contains her description of this process.

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Excerpt 31. INT2_MD

Could you describe why you stopped using the online translators that you were using previously?
Yes, well actually one of the TAs told me that it was causing a lot of miscommunications in my writing. When I talked to her I decided just to start doing more on my own. Actually, I like it better that way and I feel that I have learned more because of it. I actually want to understand it better now, whereas before I used the translator so much that I didn't even think about Spanish. I just wanted to plug it in and get an answer back.

Thus, although MD became aware of the contradiction that she was experiencing with the help of another person, she was able to successfully resolve the contradiction on her own. As a result she was also able to achieve her desired outcome for the online language learning process, "building a foundation in Spanish to work towards becoming bilingual". It is worth mentioning that MD passed the course with a high B, and she chose to continue in the Spanish II online course.

Similarly, RA was able to resolve her contradiction related two interacting activity systems. As a single mother and a university student, she experienced several moments of conflicting responsibilities, especially with respect to caring for her son. Ultimately, she was able to resolve this conflict by adjusting her actions in both activities. Thus, she renegotiated her academic and home life responsibilities with her family, and as a result she was able to continue successfully in the online course. Subsequently, the initial distraction did not appear to thwart RA's effort to succeed in the course and meet her goals. She earned an A in the course and she graduated from the university in the same semester.

JP was another example of a student who was able to resolve a contradiction encountered in the online course. She experienced conflicting objects for the same

activity of online language learning. She wanted to refresh her Spanish, yet she did not

want to spend the time required of the students in the online course. Initially this

contradiction led to the incompletion of work and missing an exam. It was evidenced that

JP was aware of this contradiction when she was asked about her normal process for

working online. A description of this is contained in Excerpt 32.

Excerpt 32. INT1_JP

Before the first observation you asked me "Should I do what I normally do? Or do you want me to work through everything the way you are supposed to? Will this affect my grade or is it just for your research?" Could you describe why you asked these questions?
I didn't know if you were going to think that I was like cheating or something. I already know most of this stuff. I just didn't want to get in trouble or have you be upset about it.

In this description JP acknowledged that her means of completing the exercises hastily

and relying on the computer-generated feedback for answers was problematic. However,

after several weeks of struggling with the contradiction, she resolved the problem by

shifting her initial object to that of simply finishing the course and earning the required

(S)atisfactory grade. Thus, JP remodeled the form of her activity to take into account her

new motive for the course, finishing the work and earning the minimum grade required.

By shifting her overall goal from refreshing her existing Spanish to simply completing

the course, it then justified her change in the means of completing the work online. She

did complete the course earning an "S" grade. When she was asked specifically about

meeting her goals for the course, she responded "I don't know. I did review a bit, but

most of the time I felt like I was wasting my time. I probably would say that I regret

taking this course, because it was more of a hassle than anything."

Unresolved contradictions and disturbances

SS was unable to resolve the contradiction that existed between her work and home life and the need to complete online coursework. She was aware of the contradiction as she indicated, "I work full time so the course is not really my main priority, even though I need it to graduate." However, not being able to resolve the contradiction ultimately led her to drop the course. In addition, she did not meet her goals for the course, passing and continuing on to Spanish. Thus, her desired outcome of passing the course, fulfilling the graduation requirement, and graduating was not achieved.

Likewise, TD was not able to resolve her contradiction related to over reliance on online translators. Her consistent over reliance on the tool to translate entire blocks of text ultimately led to poor performance on coursework and exams. She earned a D in the course. This did meet her stated goal for the course, passing and continuing on to Spanish II which was a requirement for graduation. However, it became apparent that she did not retain a lot of the information learned or intended for this course and to continue on to Spanish II. This was evidenced by her low exam scores in the course. Another unique characteristic with regards to TD's contradiction was that she was genuinely aware of the contradiction. In Excerpt 33 she described this awareness.

Excerpt 33. INT1_TD

Before the first observation you asked "should I do what I do or..?". What did you mean by this? Does this imply that there are several ways of completing the homework? How do you normally work?
Some people may consider me using the translator as cheating, so I wanted to know if you wanted me to do that. I didn't know if you think it is appropriate. It is an outside source. As long as I don't use it on the test, I don't care. It's fine with

me. It helps me get it done faster. Someone could easily have another person who speaks Spanish helping them with the work.

How do you think that using the translator affects how you learn the material?

It is probably an easier way out, but I do it to get the work done. I know it hurts me on the exams because I don't have the translator then. I just blank out.

This description was offered very early in the semester, yet no changes were made in TD's activity as a result of this ability to recognize the contradiction. She preferred completing the online assignments relatively easily instead of learning the material, which would have helped her performance on the exams. Again, although TD was aware of this contradiction in her activity and she consciously chose not to make any changes, she still accomplished her immediate goal of simply passing the course and continuing to Spanish II which she also took online.

Summary of Results

This chapter has served to describe the data collected in the research process. It also discussed the data to form answers to the research questions posited in this study. The seven cases examined in the research process exhibited a myriad of characteristics and behaviors relevant to the topics focused on in the research questions: previous linguistic and technology experiences, mediational tools, activity systems, and contradictions and disturbances.

In the next chapter there will be a discussion of these findings in relation to the theoretical frameworks, which guided this research, Sociocultural Theory and Activity Theory, and in relation to the overarching fields of Second Language Acquisition and online language learning.

Chapter Five: Discussion

This case study research, which focused on beginning online Spanish students, was driven and informed by several frameworks including: Sociocultural Theory, Activity Theory, Second Language Acquisition, and Online Language Learning. The study collected data over a semester long course to examine four research questions. The purpose of this chapter is to discuss the findings for these research questions, then to synthesize the results described previously in chapter 4 in order to provide theoretical, methodological, and practical implications in relation to the aforementioned frameworks. Last, there will be a discussion of recommendations for future research.

Discussion of Findings for Question #1

This question focused on the learners' past experiences to establish their socio-historical context and their perceptions of their current online learning. The discussion here will now address how the students' previous experiences and their perceptions thereof aided in framing the students' engagement in online language learning.

First, it is important to recognize that the subjects in the activity systems "carry their own diverse histories" (Engestrom, 2001, p.136), which they brought into the activity of online language learning. This was clearly evidenced in this study. The language learners' personal experiences with language learning and technology prior to taking the online Spanish course were varied and unique. For example, several participants entered with beginning level Spanish skills and two began the course with intermediate Spanish skills. These prior experiences also framed how the students approached completing online exercises. Similar to Belz (2002) this study found that

differences in previous linguistic experiences influenced the students' desired outcomes for the course. However, this study also found that these differences may influence the nature of mediational tool use in online language learning. For example, some students, who had limited knowledge of Spanish, referred frequently to using the computer-based tools available in EN LÍNEA and outside of the program. On the other hand, the two students with intermediate Spanish skills did not rely as extensively on technology-based tools, because they had access to more Spanish knowledge to mediate their learning. In this manner the learners' previous linguistic experiences appeared to frame the students' selection and subsequent use of mediational tools as they completed the online exercises. This discussion will be continued in more depth in the discussion section for question three, which relates specifically to mediational tools.

In regards to technology, the students did not display widely divergent experiences or technological know-how. It is fair to state that the students entered the course with greater confidence in their technology skills than linguistic skills. For example, each student began the course with prior experience in using computers, the Internet, and taking other online courses. This evidenced a sort of technological normalization, as discussed in Bax (2003). Bax describes how a technology becomes normalized when students come to expect to use it just as they would expect to use a textbook in any college level course. With regards to university students using computer-based technologies, the participants of this study expected to use the computer for language learning, and they felt confident about doing so. Although the student participants had technological experiences, none had been exposed to using these

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technologies specifically for language learning. In this manner the nature of the students'
history of mediational tool use had to evolve in the process of completing the present
activity. Thus, in this instance the nature of the mediational tool usage was altered by the
activity (Wertsch, 1985).

Last, with regards to the students' perceptions of the impact of their previous
experiences on their current online language learning, there appeared to be a difference in
their perceptions based on the depth and nature of their previous experiences. For
example, these varying perceptions were expressed indirectly in the students' course
expectations and desired outcomes for the course. Those who possessed more linguistic
experiences also expressed more advanced expectations and desired outcomes for the
course, such as refreshing existing linguistic skills. On the other hand, those who
possessed minimal Spanish skills expressed a desire simply to fulfill the language
requirement by passing the course. This finding directly supports Belz (2002), as
described previously, which maintains that a student's existing linguistic skills may
influence the student's desired outcomes. More specifically, the students' perceptions of
the influence of their past experiences on their current online language learning were both
positive and negative. This also demonstrated that the learners carried their
sociohistorical context and experiences into the current learning environment.

In addition, the students' perceptions of their previous technological and linguistic
experiences appeared to express a certain level of self-consciousness with regards to their
ability levels and expected difficulties or lack thereof in the current online language
learning context. In this manner the students' ability to recognize contradictions allowed

them to begin participating in the course with a general understanding of anticipated

linguistic problems, and it afforded them the opportunity to avoid expected pitfalls. Thus,

to a certain degree the students' preliminary perceptions acted as mediational tools by

aiding in shaping the nature of the current activity, and they impacted the nature of usage

of L2 and computer-based technologies as mediational tools. In regards to the students'

perceptions of their technological experiences, there were no variations in the perceived

effects on their online language learning. All of the students felt that they would be able

to draw on their existing schema of computer use, which afforded them an increased

understanding of the mediational tools in online language learning.

In conclusion, the findings for question one aided in establishing the participants'

sociohistorical context and they highlighted the importance of considering students' prior

history of language learning and computer usage when examining online language

learning. This type of information serves as the foundation to an in depth investigation.

This research also demonstrated how the learners' previous experiences interacted with

their desired outcomes and mediational tool usage in online language learning. Within the

AT framework this form of interactivity highlights the importance of examining the

activity in its entirety.

Discussion of Findings for Question #2

This question focused on defining the online language learners' activity systems

and tracking changes in the activity systems throughout the duration of the course. The

present study specified and tracked three consecutive activity systems pertaining to

online language learning for seven student participants. The discussion here will now

address how these activity systems, and especially changes in the systems, were used to delineate the students' contextual engagements in the overall activity of online language learning.

First, by investigating and defining the activity systems, one can see the dynamics of online language learning from multiple vantage points, not just the learner in isolation. In this study multiple facets of online language learning were revealed including the roles of the students, their environments, their use of computer-based tools, course policies and procedures, and their interactions with other students and family members. Second, similar to the discussion of findings for question one, it is important to note that this research established historicity as a critical feature. Historicity is relevant in this case because it helps in understanding problems as they develop. "Parts of older phases of activities stay often embedded in them as they develop" (Kuutti, 1996, p.26), and thus, sources of tension may be revealed by examining these consecutive activity systems. As such, the foundation of any given activity is based on the previous activities, which have led up to the current activity. Often these previous forms of the same activity are unexamined. However, by examining these multiple layers of the same activity system (Engestrom, 2001, p.136), this research was able to identify several key changes in regards to their components.

The most prominent changes were observed in relation to changes in the object, changes in the use of mediational tools, and the introduction of new interacting activity systems. For example, JP's change in the activity's object changed her overall purpose for the activity, shifting from desiring to refresh her Spanish to merely completing the

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course. Subsequently, this affected other aspects of the activity including the manner in which she used the EN LÍNEA courseware. In addition, it further demonstrated that "the object of activity is a moving target, not reducible to conscious short-term goals" Engestrom (2001, p. 135).

In regards to the changes observed in the use of a mediational tool, these ultimately changed the students' engagements with activity by altering the manner in which the task was completed. For example, a noteworthy observance was made in relation to the students' over reliance on particular tools. Subsequently, when the students were able to reduce over reliance on a particular tool, the activity itself changed. L1 and L2 became more significant mediational tools. This finding was congruent with similar research conducted in SLA using activity theory, which indicated that the tool has the potential to alter the activity (Wertsch, 1985). In addition, this finding supports the work of Coughlan and Duff (1994) and Roebuck (2000), which demonstrate the difference between task and activity. Although the students were faced with the same task or assignments online, their task, each student shaped their individual activity as they progressed in the course. Shaping their activity was accomplished in part by adopting and adapting a unique form of use for a particular set of mediational tools, which the individual student selected.

Last, the introduction of a new interacting activity system added to the context in which online language learning took place. When the subjects introduced other subjects into the activity of online language learning directly, these individuals also had an effect on the processes related to the language learning. For example, several of the new activity

systems introduced or that became relevant later in the course served as distractions to online language learning. As a result the students had to adjust their means of completing the online assignments to account for these new disturbances.

In conclusion, defining the participants' activity systems served to define participants' overall context. These systems highlighted how the participants interacted with their environment to participate in online language learning. They also demonstrated that the activity itself was dynamic. It changed constantly as the students progressed throughout the semester. In most cases each of these changes was driven by an underlying contradiction. Although, these changes are addressed preliminarily here, they will also be discussed later in the discussion section for question four, because they are a principal factor in discussing contradictions.

Discussion of Findings for Question #3

This question focused on the types of mediational tools used in the Spanish course to complete the online exercises. Although mediational tools include the psychological, such as languages, the focus for this research was on physical mediational artifacts, in particular technology-based artifacts such as the computer and related tools. The discussion here will begin by addressing how the physical tools framed the students' engagement in online language learning.

Throughout the activity of online language learning, the computer and computer-based tools worked in conjunction with the university and departmental policies, the course syllabus, the instructor, other classmates, and of course the student participant, to shape the overall learning experience. Thus, the computer-based tools, utilized by the

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students, framed their engagement in the activity of online language learning in several aspects. First, utilizing the computer for online learning removed the students from traditional, classroom-based language courses. By placing the students into a new learning environment with a variety of computer-based tools and an increased spatial distance, some experienced a less familiar and possibly less comfortable learning environment. As a result, the mediational tools, combined with the learner and the tasks included in online language learning activities, played a role in forming the new learning environment for the online language course. Second, several of the students encountered difficulties based solely on the computer and its related tools, which stalled or prevented them from successfully completing their assignments and achieving their overall goals. These were difficulties that would not have been a concern if it were not for the use of the technologies. For example, several students encountered non-working technologies. Third, because online language learning combined the use of the computer and ultimately the target language, the students were also accountable for entering the appropriate international characters, of the Spanish language in this case. Based on the use of an accent tool bar within the EN LÍNEA program or the use of CTR+ALT commands, this process was more difficult for some students than it would have been otherwise.

In addition, because several of the students began the course with limited linguistic experience, typically they also had poor control over the linguistic abilities necessary to complete the online exercises, such as grammatical and lexical knowledge. Thus, the students' prior knowledge of Spanish was not a sufficient mediational tool within itself. Despite this apparent lack of proficiency in the L2, these same university

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level students entered the online Spanish course as experienced learners with regards to college level courses, online courses, and using specific computer-based tools. These experiences and the students' subsequent use of computers as mediational tools are what allowed the students to progress successfully in the online language course without the physical presence of an instructor.

To achieve this success the students relied on one of the computer-based mediational tools, or a combination of two or more tools, to solve the immediate linguistic problem and to accomplish the overall task. Based on the limited proficiency of many of the beginning level students, it was rare that a student was able to complete the online exercises without the use of a computer-based tool. Having said this, two of the more experienced students, JP and JA, were exceptions to this generalization. Because they both began the course with existing knowledge of Spanish, which would classify them at the intermediate level, they relied less extensively on the available tools and more on their existing knowledge. For example, it was common for these students to completely skip over parts of the lesson, which were deemed essential by all other participants, including the initial review of the tutorials to learn new linguistic information. This demonstrated Thorne's (2003) idea that the same task may be completed differently by learners in unique socio-cultural contexts and in this case with unique socio-historical experiences and existing knowledge. In this research, it resulted in the use of different tools and different forms of use for each tool to accomplish the same set of tasks. This also coincided with the findings of Wertsch (1985), which reported that the tool may alter the shape of the activity and the tool may be altered by the activity.

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Having established the general role of the computer in framing the students' engagement in online language learning, the discussion now shifts towards examining the connection between the use of these mediational tools and the students' subsequent levels of regulation. The computer-based tools made solving some linguistic problems possible that would not have been possible otherwise, much like using a calculator to solve a difficult math problem. Similarly, by helping the students understand difficult material, increasing their comprehension, and providing information on demand, the mediational properties of the computer allowed students to gain control over their learning and resulting performance. This was similar to the findings of DiCamilla and Anton (2004), in which they describe how learners use private speech as a mediational tool to aid in concentrating on the task at hand. This form of gaining control is precisely what Aljaafreh and Lantolf (1994) describe as the progression from object-regulation or other-regulation to self-regulation (p.470).

For example, some students were successful at understanding Spanish text only through Spanish to English translation. To accomplish this, the students read through text materials and when they encountered words or phrases that were difficult to understand, they referred to online dictionaries and translators and L1 to understand the Spanish phrases. Initially, several of the less experienced students relied extensively on the online dictionaries and translators to find the meanings of almost every word encountered in the exercises. This form of over reliance on a mediational tool is a key factor indicating their object-regulation.

As the students progressed in the course they became more familiar with the Spanish language and the use of the online dictionaries and translators as mediational tools. This allowed the students to internalize the use of these tools so that their use became more automatic. As a result the students' over reliance on the online dictionaries and translators lessened as well. Thus, the students progressed from their initial object-regulation, over relying on the tools, to self-regulation in which the use of these tools became a more natural and internalized process. In addition, several students displayed forms of continuous access (Guerrero & Villamil, 1994) in which they transitioned back and forth between object-regulation to self-regulation and vice versa. This further demonstrates that self-regulation is not necessarily a permanent state.

In conclusion, the findings of this study demonstrated that the use of computers and computer-based tools as mediational tools within online language learning is a multi-faceted and complex issue. The computer-based tools used varied immensely in their functions and subsequent forms of use. They varied according to the users', or the online language students', socio-historical experiences, knowledge, and abilities. Ultimately, the computer and its related tools become a part of the activity by being an obstacle or a useful tool, and in part it was the interactivity between the use of these mediational tools and the other components of the activity system, which formed the resulting activity for each student. The following discussion section pertaining to contradictions and disturbances will further delineate the concept of the computer as an additional source of tension within the activity.

Discussion of Findings for Question #4

This question focused on the types of contradictions and disturbances encountered by the students in their online language learning. It was also intended to determine whether the students were able to resolve these contradictions as they occurred and how this shaped their development. This study identified three major levels of contradictions conflicting-object contradictions, inter-activity contradictions, and technology-related contradictions. The following discussion of these contradictions will highlight the significance of the students' ability to recognize contradictions, their ability to make the necessary shifts to overcome them, and the relevance of realizing their desired outcomes.

First, it is important to note that contradictions occur as "historically accumulating structural tensions within and between activity systems" (Engestrom, 2001, p. 137). Thus, these tensions development and change as the activity progresses. The specific contradictions discovered in the data collected for this research demonstrated that the task of online language learning may be the same for each student, yet their resulting activity or the path taken to accomplish the task may be different. Thus, as each student progressed in the course their paths taken were divergent and the tensions encountered were different as well. As a result, a variety of contradictions were uncovered in this research.

This study found that one of the keys to a successful resolution of contradictions is the students' ability to recognize thease emerging tensions in their learning process. The findings of this study support (Capper & Williams, 2004), which indicated that contradictions may be invisible to the subject of the activity. In this research, one student

did not have the ability or know how to identify the contradiction. Furthermore, it was noted in this research that some students may have the capacity to identify the contradiction, yet they may not have the motivation required to make the necessary change to further learning and development within the activity. Thus, contradictions may not always be resolved even when they are visible.

As other researchers discuss (Peruski, 2003; Russell & Schneiderhenize, 2005; Blin, 2005), these types of unresolved contradictions typically do not lead to change. As a result the activity, in this case language learning, may become stagnant or it may continue in a more stymied state. On the other hand, in cases where the students were able to identify the contradiction and make the necessary changes, they were also able to continue successfully in the overall activity. Useful insights were gained from monitoring the students' changes, because it afforded a view of how they adjusted their actions in the activity according to the tensions confronting them. For example, JP resolved her conflicting-object contradiction by adopting a new object for the online Spanish course. She redefined the activity midstream. This further demonstrated that the activity of online language learning is not merely a static process of knowledge transmission in which the learner receives knowledge. Learners have the ability to alter the activity as it progresses. Likewise, MD resolved her contradiction by adapting the manner in which she used the online translators, and RA resolved her inter-activity contradiction by renegotiating a plan for balancing home and university life.

Linking the Findings

Having already discussed the research findings as they relate to the research questions, the purpose of this section is to discuss how these findings may relate to each other. By linking the findings in this manner, it may be possible to establish connections that would not otherwise have been discussed. The following section attempts to establish two connections: linking the changes in the students' activity systems with their attempts to resolve contradictions and linking the mediational tools with the students' contradictions.

First, the changes in the activity systems, as presented in the discussion of findings for question two, directly related to the contradictions encountered in the activities. In several cases these changes were the students' attempt at resolving the contradiction. For example, JP shifted the object of her activity to account for her conflict of interest between wanting to rehearse her existing Spanish and wanting to spend as little time possible in doing it. Likewise, MD modified the manner in which she used online translators to overcome her struggle with over relying on them to translate Spanish words and phrases. In both of these cases, the students initiated explicit changes in their activities which were a direct attempt to overcome the contradictions facing them. Successful personal development in the activity depended on these changes.

Second, in one sense it was the use of the computer and online tools, which enabled the students to take the online Spanish course; however, in another regard these same mediational tools also played a role in causing technology-related contradictions for the students. Thus, the technology, which was essential for online learning, also became a source of conflict in the activity. Furthermore, for several students the same technologies

served as a means of resolving other contradictions encountered in online language learning. In this manner it became evident in this research that computer-based tools have the potential to serve both as mediational tools and as a source of conflict in online language learning.

Theoretical Implications

In this section implications from the findings in this study will be presented and applied to the theoretical frameworks that informed all facets of the research. First, implications from the findings will be applied to Sociocultural Theory and Activity Theory. Then, they will be applied to Second Language Acquisition and Online Language Learning.

Sociocultural Theory and Activity Theory

Congruent with previous SCT research in SLA (Warschauer, 2005; Meskill, 1999), the research presented here found evidence which supports the notion of the computer being used as a mediational tool. This research identified several computer-based technologies, which were used as mediational tools in the process of online language learning. These computer-based technologies were used to control thought processes and manage incomprehensible phrases when confronted in online learning. This usage was also linked indirectly to the students' levels of previous linguistic experiences. In addition, this study supports findings of Aljaafreh and Lantolf (1998), which described various levels of development progressing from other regulation to self-regulation. However, the present study discussed this with regards to online language learning and the use of computer-based tools as mediational tools. In this case, once the

students became more familiar with particular technology-based tools, they were able to internalize their use. Thus, automaticity in using these tools became more commonplace. Last, the online students displayed forms of continuous access, which was previously described by Guerrero & Villamil (1994). This demonstrated that the learners did not remain in self-regulation once it had been reached. Depending on the particular task at hand, the learner reverted back to object-regulation and other-regulation when necessary.

By extending this discussion to include the theoretical framework of Activity Theory, this research was also able to demonstrate how different students may engage in a unique activity while completing the same task of online language learning. Even though the participants of this study had equal access to the same tools, each student displayed unique behaviors with regards to their usage of the computer and computer-based tools in the process of online language learning. This finding further supports previous research distinguishing between the intended linguistic task and the resulting activity (Coughlan & Duff, 1998; Swain & Lapkin, 1998), which is based more on the individual's needs and preferences. Likewise, the students' previous experiences are carried with them into the present activity, and they aid in shaping the activity through their influence on mediational tool use and the formation of desired outcomes

In addition, from the description of the computer and related tools in this research, it is apparent that the computer may become a member of the activity (Siekmann, 2004; Thorne, 2003). As a member of the activity it interacts with the other components including the subject. In this manner it may serve as a valuable tool or it may be an obstacle preventing learning itself. This study also illustrated how the activity systems

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evolve and have the potential to interact with other systems. Last, by examining multiple layers of the same activity, one can see learner development through the handling of contradictions. This type of examination also allows tracking learner resolution of these contradictions and their resulting outcomes in relation to their desired outcomes.

Second Language Acquisition

While SCT and Activity Theory may be used to inform several fields of second language acquisition, the findings of this research, guided by SCT and AT, are most relevant to the role of the learner and his or her sociohistorical context and the role of the computer as a mediational tool used in the process of language learning. These aspects of second language acquisition will be addressed in the subsequent sections.

As was discussed previously in chapter 2, SCT and Activity Theory diverge from traditional and commonly more accepted cognitive approaches to SLA. These differences are based principally on the social nature of language learning perceived as both an external and internal process. The findings of this research provided evidence that supports that even though online language learners are not participating in traditional classrooms, they do not act in isolation. They still act in a social environment, and they still bring previous knowledge and experiences into language learning. Thus, their learning process cannot be viewed as an isolated outcome. These outcomes should only be viewed in relation to the overall process of language learning, including the learners' treatment of contradictions encountered along the way.

This research also demonstrates how language learners use computer-based technologies as mediational tools to gain control over their own learning processes.

Computer-based tools, such as online dictionaries and translators, allowed the students to reach an understanding of words and phrases that they would have struggled with otherwise. This further demonstrates how the learner's environment, including mediational tools, has the potential to influence learning and development. Online language learners do not act in isolation without respect to the mediational tools afforded to them in the online environment.

Online Language Learning

Within the general field of SLA, SCT and Activity Theory have important implications specifically for online language learning. The findings presented in this study demonstrate that online language learning takes place and can be examined in sociohistorical context. Furthermore, within this context the students must actively engage in online language learning by utilizing computers and computer-based technologies as mediational tools. This coincides with the shift from viewing the computer as merely an electronic resource or a means of word processing. In online language learning it is only through the successful use of the computer-based tools that the learners will be able to acquire the language. Thus, the technology provides the opportunity for distance learning, and it also contributes to student success.

The findings of this study have also provided some valuable insights into new directions for online language learning research. They have demonstrated that online students are able to progress towards self-regulation without the physical presence of an instructor through the use of mediational tools, and that they can be successful in the

resolution of contradictions. Future research could integrate SCT and AT online language

learning research to uncover more in relation to these socially driven learning processes.

Last, investigating online language learning from a sociocultural or activity

theoretical perspective is a relatively new strand of research; however, it has been

demonstrated by the present study and other research that online language learning

should be further investigated as a social phenomenon including an exploration of the

learner's socio-historical context. In addition, the theoretical frameworks provided by

SCT and AT provide an appropriate means of investigating, discussing, and analyzing the

transformational processes related to online language learning. With this in mind, the

discussion will now shift towards the relevant methodological implications noted as a

result of the current research process.

Methodological Implications

In regards to methodological implications, this study has demonstrated several

key points which may be relayed for use in future research of online language learning.

These points, which will be discussed below, were observed in relation to the

effectiveness of the Activity Theoretical case study approach, the efficiency of employing

video recordings for data collection, and the importance of recognizing the duality of the

researcher serving simultaneously as the instructor within the research context.

First and foremost, this study has demonstrated the appropriateness of utilizing

the case study approach to research driven by the tenets of Activity Theory. As described

more concretely in chapter 3, AT case study employs various methods that enable

tracking the socio-historical development of learners engaged in online language

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learning. This also aids in researching this type of learning as it occurs naturally, which is consistent with Yin's description of case study research being used for investigating "a contemporary phenomenon within its real-life context" (Yin, 2003, p14). Last, utilizing an AT case study in this manner avoids isolating learning to an isolated event represented only by the outcome.

Second, this study has also highlighted the usefulness of video-based recordings in capturing the multiple levels and varying components of online language learning. In this study, video recording equipment was utilized in the students' situated environments to document their online language learning. The researcher transported and set up the equipment at each location before data collection commenced. Screen recording software may be used to accomplish the same feat; however, in this case video recording was more practical, being both more cost and time effective. One of the main issues with utilizing screen recording software is that it has to be licensed for individual use before installation. Then, if using an environment selected by the learner, which typically includes the students' personal computers and laptops, each student has to allow the software installation. Researchers could artificially place students in a more controlled environment by placing them into a computer lab for observation; however, this would likely reduce the level of the naturalistic settings from which the students participate.

Perhaps, the most efficient strategy for data collection may be to combine video recording and screen recording software where the overall cost is manageable. This would afford the opportunity to simultaneously record students' on screen actions as well as their off screen actions. This combined approach would also coincide with the general

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AT case study method. In addition, by utilizing multiple methods for data collection, researchers would not rely too heavily on any one source of data.

Third, if the researcher serves as the instructor for the context under investigation, it is important to recognize that there may be competing interests. For example, as an instructor one may view the students' shortcuts as described in this research as being detrimental to the overall learning process. However, from a purely research-based standpoint these same shortcuts should be described in the context of the students satisfying their overall purpose for the activity of online language learning. Thus, what may be detrimental to their learning process may reflect a student's conscious decision to only pass a course or fulfill a requirement by means of acquiring points as easily as possible.

Practical Implications

In regards to practical implications, this study sheds light on several needs which should be addressed for the betterment of online foreign language learning and teaching. This section will address these implications in regards to the role of the computer as a mediational tool.

Online instructors and learners need to recognize that the role of the computer and its related tools should be valued as mediational tools within online language learning. It is only through successful use of these mediational tools that learners will be able to develop self-regulation over their online language learning processes. Thus, when learners are unable to successfully use these computer-based tools, the result is typically some type of conflict which may prevent their learning progress. In these instances online

language instructors need to be aware of the students' behaviors, and they should be concerned with identifying problematic behaviors as they occur. In turn, this would allow instructors to help students become more aware of contradictions and disturbances which afflict their online language learning, such as over reliance on computer-based tools as evidenced in this study. To accomplish this online instructors must thoughtfully review students' online submissions and subsequently address them with the students to consider the process and the use of tools.

Another method of raising student awareness in regards to the role of the computer would be for instructors to offer a pre-course computer training session. In this manner online students could be exposed to some of these computer-based tools prior to beginning online language learning. This would ensure that some of the less technology savvy students would begin the course with some existing knowledge of the available tools. In addition, a training session related to the availability and proper use of electronic tools could also be used to raise awareness of potential problematic behaviors. By exposing the students to the technologies and raising their awareness of potential problems, they may have a better opportunity for successfully participating in online language learning and achieving their overall goals. As a result the students will have more options, enabling them to take divergent paths in the activity and ultimately strive for their desired outcomes.

Directions for Future Research

Based on the discussion in the previous sections of this chapter, one can easily see that this research has generated significant and interesting findings. It is also this

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discussion, which leads to an assortment of possibilities for future research. These possibilities will be discussed in the following section.

Future research needs to focus more on specific mediational tools used for online language learning. For example, researchers should isolate and focus on specific computer-based tools such as online dictionaries or online translators which were pervasive in this study. This type of research could further determine how students use these tools to gain and maintain self-regulation within online learning. In addition, researchers should focus on the mediational use of the target language, or L2, in the processes related to online language learning. One of the ways to implement this type of research would be to conduct audio and on screen recordings. Then, the subsequent transcripts should be analyzed to note the mediational properties of L2 and its development.

Future research should also investigate the role of the instructor. To accomplish this, researchers could similarly track instructors' activity systems as they form in the process of participating in online language courses. This type of research could address how the role of the online instructor changes from traditional, face-to-face language courses, and how instructors initially work through these changes. It could also incorporate the instructors' perceptions of students' behaviors and performance in online language learning. This type of research could further expand the base of knowledge in both online language learning and teaching and possibly the related field of foreign language teacher education.

Future research should focus on collaborative pairings and groups in online language learning. This type of research would further develop Engestrom's (2001) concept of interacting activity systems. This was not an intended focus of this research; however, at several points in the data collection and subsequent data analysis procedures it became evident that there were several underlying sets of interacting activity systems that could be further investigated. This type of research would also aid in exposing other potential contradictions and disturbances which may occur in online language learning.

Last, throughout this research process it became evident that the students began the course with varying contexts and they made specific decisions, which ultimately shaped the path taken in their central activities. It may be useful in future research to implement an additional analytic structure, such as rhizomatic analysis (Deleuze & Guattari, 1980), which is better suited to track these types of paths. Such a form of path analysis, if integrated well with the interactive structure of Activity Theory, may aid in discovering and representing this type of path-based development in online language learning.

Conclusion

By observing seven unique cases over the span of a semester long, online Spanish course this study was able to answer the four proposed research questions. This was aided in large part by the richness and variety of the data collected, which have provided an interesting look at the complex processes associated with online language learning. However, in the process of portraying these unique cases and discussing the results of this study, new and equally intriguing questions have been generated. The formation of

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such new questions should not diminish the value of the present study and its results; however, it is more representative of the inherent, cyclical nature of inquiry and research itself. Thus, this research project will be deemed successful if its readers are subsequently capable of positing new questions by combining knowledge gained from this investigation with existing knowledge. Doing so can only promote further progress in the fields of Sociocultural Theory, Activity Theory, Second Language Acquisition, and online language learning.

Last, it is important to recognize that the cases presented in this study may or may not be representative of other online language learners. Each case and learning context investigated comes with unique social and cultural characteristics, which may not be common to other learning and academic contexts. This research does offer information regarding the potential range of issues that may be encountered in online language learning; however, discretion should be used if extending and applying the information directly to other teaching and learning contexts.

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Appendices

Spanish I Syllabus

En Línea Spanish I (SPN 1120)
USF /World Language Education
4202 E. Fowler Ave., CPR 408
Tampa, FL 33620

Office: Cooper Hall 408 (in World Language Education Office CPR419)
Office Hours: 9am-4pm (Monday through Thursday)
(813) 974-3969   Fax: (813) 974-1718
Instructor: Joe Terantino   **Email:** jteranti@mail.usf.edu
TA: Axel Presas
TA : Alicia Mercado

All students registered in SPN 1120, Ref#**10716**, must also be registered in the following lab:
Ref# **/10718** MLL   SPN   1120L-501   Beginning Spanish I Lab
Failure to register for the correct lab will result in a U grade.

Welcome to En Línea! This course is an online course open to beginners and
students with no or little background in Spanish who would like to improve their
knowledge of the language and culture. This course is not available to native or near-
native speakers. Native and near-native speakers should take the Spanish for Native
Speakers course. If the instructor determines that you are a native speaker you will be
dropped from the course.

The level of proficiency you attain will depend on you as the student. This course
will require **self-discipline and time**. As with any distance learning course, 99% of the
responsibility of learning and keeping track of progress falls on the student. If you feel
you lack the self-discipline and time to be successful in this course, you may want to
consider the classroom setting. The amount of time and effort you put into the course will
directly affect your performance and your satisfaction. We encourage you to take
advantage of the instructor's office hours as well as the review sessions. Keep up with the
pace of the course and ask for help as soon as you feel you need it.

You may elect to take this course with the S/U (pass/fail) option. S/U grades do
not impact a student's grade point average. If you choose this option, you may fill out an
S/U agreement prior to the end of the fourth week of classes. **You cannot choose this
option if you need to satisfy the foreign language requirement.** To continue to Spanish
II you must earn a "D" or better in Spanish I, however, most students that earn a "D" in
Spanish I will continue to struggle in Spanish II because they lack a solid foundation for
the language. To fulfill the foreign language requirement you must pass Spanish II with a
C or better.

**You must attend one of the following orientation
meetings or you will be dropped:
Saturday January 6, 2006, 9:00-10:30am in *CPR 103*
Wednesday January 10, 2006, 6:00-7:30pm in *ENA 105***

TEXT AND MATERIALS

Vistas: Introducción a la lengua española. (Second Edition). By José A. Blanco and
Philip Redwine Donley. ***Textbook package must include online book code.*** See pages
attached for online purchase.
YOU WILL ALSO NEED A **MICROPHONE** to complete audio recordings to be
submitted online. Optional: workbooks, CD-ROMs, etc.

Computer Labs: CPR 119 (Please call for hours. 974-3748)

REVIEWS

There will be a **mandatory initial orientation meeting**, four optional review
sessions, and four required examinations. Please refer to calendar for dates, times and
places. The optional review sessions will be scheduled to answer questions and to help
students with problems. If you cannot attend, but need assistance, please call the
instructor during office hours or leave a message to be called back. We encourage you to
call immediately when you have a question, no matter what time, and leave a message in
our voice mail with a telephone number where we can call you the next working day.
This will prevent you from forgetting the question. We will call you with an answer the
next working day. It is important to understand a concept before you can successfully
move on, since the homework exercises build on one another. You can access En
Línea/Blackboard for your homework and exam grades. You will also have access to an
outline of the points discussed in the reviews.

EXAMS

The exams will be given according to the calendar at the designated time and
place. You must bring a picture I.D. to every exam and to pick up grades. We offer the
exam twice in the same week to allow for some flexibility with your schedule and we
provide you with a detailed schedule so that you can make arrangements to attend the
exams. **We will not administer make-ups.** If, however, due to an **emergency** you
cannot attend an exam, call the office **before** the exam. You will need to provide **written
documentation** that supports your absence **as soon as possible**. Exams will be based on
the exercises and activities from the workbook and textbook that you have been working
on in your weekly assignments. If you have a scheduling conflict for any of the exams
you must notify the instructor within the first 2 weeks of the semester. Alternative exams
will not be offered later in the semester.

We **strongly encourage** you to get in the habit of checking **EN LÍNEA and your e-mail account.** Things can and do change during the course of a semester and we will use your e-mail accounts to inform you of any changes in the course plans (room changes, reminders, announcements, etc.) It is **your responsibility** to check blackboard and your e-mail account incase of possible changes.

HOMEWORK ASSIGNMENTS

You should expect to spend and average of 10-20 hours a week completing your homework, so plan ahead. Doing it the night before will prove to be counterproductive and very difficult to finish. Please refer to the schedule provided below. Also assignment due dates are posted in En Línea. Click on the Assignments tab at the top left of En Línea for a display of the assigned sections and the due date. The blue diamonds indicate the assigned exercises. For each lesson's assignments you will have two attempts to submit the exercises. The second attempt is automatically graded regardless of the score.

Note: Homework assignments are due before midnight. ***We will not accept assignments after the due date regardless of the circumstances***. *Late homework (even if it is 1 minute after midnight) will result in an automatic 0 for that assignment. Note that En Línea automatically date and time stamps your assignments and is set to not grade late assignments. In the event that you do miss a deadline, you should still complete the assignments as they will help you with exams. Also, in the event that your final grade is borderline any completed exercises that were not graded will be considered provided that there is a **documented excuse**, which the instructor was made aware of at the time it happened.*

GRADING

There will be no curving of scores. **Keep in mind that the tests will be kept at the office (CPR 408). You should come to our office to review your exams.** The grading will be done on a decimal scale 100-90=A, 89-80=B, and so on. Your grade will be calculated according to the following formula.

Online Assignments (includes lab)	40%
Exam #1 (Lessons 1-2)	10%
Exam #2 (Lessons 3-4)	15%
Exam #3 (Lessons 5-6)	15%
Exam #4 (Lessons 7-9)	20%
Total	100%

Please notice that your homework consists of 40% of your grade. This implies that missing an assignment can lower your final score even more than missing an exam. Exams are still an important part of your grade, but doing your assignments

will give you the practice you need to do well on the exams as well as the weight to bring up your grade.

If possible, attend all review sessions. Try to study and practice with someone from the class. Also, call or e-mail the instructor imedialty when you come up with a question or problem. There is no such thing as a silly question. You may need to understand a concept before you can move on to the next. In addition, office appointments can be arranged to help you if the office hours conflict with your schedule.

Note: *Memorizing lists of words does not constitute learning a language. Understanding the grammar and the VERBS is what will allow you to create with the new language. Avoid translating word for word as single words may have multiple meanings. Look for the* **_meaning_** *of the word or phrase and translate the* **_concept_** *in the new language.*

INCOMPLETES

 Students will qualify for an "**I**" grade (Incomplete) only if they satisfy the following:
      ***Must have completed at least ¾ of the course work.**
      ***Must have a passing grade.**
*Must have documentation supporting any extenuating circumstance which prevents the student from finishing the course.

      ***Remember that an I has to be removed the following semester or it becomes an F.**
      ***If you have any questions about incompletes, please refer to the Undergraduate Catalog.**

LANGUAGE LEARNING TIPS/ FOOD FOR THOUGHT

1. *Be tolerant* to not understanding all of what you are hearing. Be comfortable listening selectively.
2. *Use trial and error*…for *practice*. Language is more skill than knowledge.
3. *Spanish is not English*. Be prepared to look at everything differently – not only words and phrases, but also *complete* ideas.
4. *Listen and speak at every opportunity*.
5. *Lose your fear of making mistakes*.
6. .

7. ***Language is not grammar***. Grammar simply helps learners understand how things go together.
8. The most commonly asked question…***When will I be fluent?***

Depending on the difficulty of the language, experts suggest 1000-2000 hours to get ready to take academic courses in that language in a country where the language is spoken. By the end of this semester, you will have completed between 50-100 hours of homework and study. Even with that, you have at most, completed 10% of the journey to fluency. Keep in mind that the goal of classroom instruction "is not to produce native speakers or even error-free second language performance. It is, rather, to develop intermediate second language competence, to bring the student to the point where he can begin to understand the language he hears and reads outside the class and thus improve on his own" (Krashen, 1981).

EN LÍNEA I
enero de 2007

D S	L	M	Mi	J	V
	1	2	3	4	5	6 **Orientation 9-10:30am**
7	8	9	10 **Orientation 6-7:30pm**	11	12	13
14	15 **MLK**	16	17	18	19	20
21 **Due L.#1**	22	23	24	25	26	27
28 **Due L.#2**	29	30	31 **Review 6pm**			

febrero de 200

				1 **Exam #1 6pm**	2	3 **Exam #1 9am**
4	5	6	7	8	9	10
11 **Due L.#3**	12	13	14	15	16	17
18 **Due L.#4**	19	20	21	22	23	24
25	26	27	28 **Review 6pm**			

marzo de 2007

				1 **Exam #2 6pm**	2	3 **Exam #2 9am**
4	5	6	7	8	9	10
11	12 Spring Break	13 Spring Break	14 Spring Break	15 Spring Break	16 Spring Break	17
18 **Due L.#5**	19	20	21	22	23	24
25 **Due L.#6**	26	27	28 **Review 6pm**	29 **Exam #3 6pm**	30	31 **Exam #3 9am**

abril de 2007

1	2	3	4	5	6	7
8 **Due L.#7**	9	10	11	12	13	14
15 **Due L.#8**	16	17	18	19	20	21
22 **Due L.#9**	23	24	25 **Review 6pm**	26 **Exam #4 6pm**	27 Last Day of Class	28 **Exam #4 9am**
29	30					

**Please note that all assignment due dates are also indicated in the En Línea program.

Appendix B

Overview of Technical Requirements for EN LÍNEA

WHAT IS *EN LÍNEA: VHL Spanish eCourse*?

EN LÍNEA is a complete standalone online introductory Spanish course, suitable for online courses and distance learning applications or as a textbook alternative.

- **EN LÍNEA** is based on the classroom-proven content of Vista Higher Learning's best-selling introductory Spanish program, **VISTAS, Second Edition**.
- Your students can access specially designed step-by-step vocabulary and grammar tutorials, reference resources like an electronic verb wheel and interactive dictionary, do written and oral practice activities, complete tests, and communicate with you and their e-partners.
- You also have access to powerful electronic gradebook and classroom management tools for tracking students' performance and administering tests.

ACCESSING EN LÍNEA

To access **EN LÍNEA**, you will first need either to create a personal instructor account or to log onto an existing account. Then, use the "*book key*" to add **EN LÍNEA** to your instructor account.

1. Visit **http://www.vistahigherlearning.com/login/**.
2. **If you already have an account**, please log in to your account using your existing username and password.
3. **If you do not already have an account**
   a. Click on **Instructor Workstation**.
   b. Click on **Create a New Account**.
   c. Fill out and submit the online form. **NOTE**: KEEP your username and password.
4. Now that you are logged onto your account, you will see a text box in the upper right corner of the **Instructor Workstation** labeled "**Adopt a new book: Enter book key**".
5. In this box, enter the *book key* for **EN LÍNEA** (shown below). Then, click **GO**.
6. Click **Continue** to return to the **Instructor Workstation** and begin using **EN LÍNEA** .
7. In the **Instructor Workstation**, **EN LÍNEA** will appear listed under **My Courses**.
8. Under **My Courses**, click on **Preview** to access the version of the course that your students will see, or click on the course name (**EN LÍNEA**) to access Grading & Management Tools.
9. Your course will be identified with a **course code**. It will be displayed in a box at the top right corner of the course's main page. **NOTE:** Your students need a **course code** to register for your course and the class.
10. Click *printable registration instructions* under the **Roster** menu to view and print the student registration instructions for your class.

===== **Instructor Access Key** ======
Your personal Instructor *book key* for **EN LÍNEA**:

ENLN3RNH4FGB8C6RDJ4

TECHNICAL REQUIREMENTS

Operating System
- **EN LÍNEA** is designed to work with Microsoft Windows.
- If you use a Macintosh or any other non-Windows operating system, **EN LÍNEA** may still work correctly, but is not officially supported.
- If you encounter problems with particular activities while using a non-supported operating system, you will need to access those activities from a Windows PC (e.g. in a computer lab, library, etc.)

Internet Browser Software
- **EN LÍNEA** is best viewed with the latest version of Internet Explorer (5.x or later). You may download Internet Explorer (IE) for free at www.microsoft.com/downloads.
- If you use America Online (AOL), instead of using the browser built into the AOL program, please connect to the Internet using AOL, then minimize the AOL program and use IE to view **EN LÍNEA**.
- If you use any browser besides IE, such as Mozilla Firefox, Opera, or Netscape, **EN LÍNEA** may still work correctly, but is not officially supported.
- For users attempting to access **EN LÍNEA** on a Macintosh, the latest version of the Safari web browser will provide the best results.
- Browser preferences must be set to enable *Java* and *JavaScript* and to accept *cookies*.
- The latest versions of following browser plug-ins must be installed on your computer: *Macromedia Flash Player*. (Download Flash for free at **www.macromedia.com/downloads**.) *Adobe Acrobat Reader*. (Download Acrobat Reader for free at www.adobe.com/products/acrobat.) *Shockwave Player*. (Download Shockwave for free at www.macromedia.com/downloads.)

Computer Hardware
- Your computer screen resolution should be set to a minimum of 1024 x 768 pixels. If your monitor is set to another resolution, you will need to use the scroll bar to view the whole screen.
- Your computer must have the appropriate hardware and peripherals to play and record sound. This can be either a set of external speakers and a standalone microphone, or a headset that includes a built-in microphone. In the rare case that your computer doesn't already have one, you will need a standard audio card.
- If your computer doesn't meet these hardware requirements, please contact your school's technical support staff.

Internet Connection
- A broadband or high-speed Internet connection (e.g. Cable, DSL, T1, LAN) is recommended for optimal use.
- Dial-up connections are supported, except for use with the ePartner Feature or downloading video files. You may also experience delays in downloading audio files if you are using a dial-up connection.

CONTACTING TECHNICAL SUPPORT
- If you encounter problems creating your **EN LÍNEA** course or other technical problems, please send an e-mail to: **enlinea@vistahigherlearning.com**.
- You may also call Vista Higher Learning Tech Support at: (800) 248-2813 (9am-5pm EST).

Appendix C

EN LÍNEA Lesson 1 Outline of Activities

I.   Beginning page for lesson- overviews the lesson's contents

II.   Contextos- presents and reviews communicative based materials

    a. Overview of communicative goals

    b. Tutorials-presentation of new information

    c. Practice exercises based on listening comprehension, reading, and fill in the blank

    d. Collaborative recorded conversations

    e. Quiz for post activities review

III.   Fotonovela

    a. Video episodes integrating lesson's vocabulary

    b. Comprehension questions

IV.   Pronunciación

    a. Presentation of sounds

    b. Practice exercise

    c. Individual recording

V.   Cultura-

    a. Readings/video presentation of new information

    b. Practice exercises

    c. Collaborative role playing recorded activity

Appendix C (Continued)

VI. Estructura- presents and rehearses important grammar structures

    a. Tutorials/text pages-presentation of new information

    b. Practice exercises based on fill in the blank, writing, grammar

    c. Collaborative recorded conversations

    d. Quiz-like review

VII. Adelante- rehearses reading, writing, and listening skills

    a. Presents strategies for comprehension,

    b. Pre activity warm-up exercises

    c. Post activity comprehension exercises

VIII. Vocabulario- reviews important vocabulary words

    a. Vocabulary lists

    b. Audio pronunciation of words

Appendix D

Background Survey

Personal Information

1. Name: Date:

2. USF ID (not a social security number): U

3. Age __   Gender __ M __ F

4. Phone Number: (   )   -   Email address:

5. Student Status __ Undergraduate __ Graduate __ Other

6. Birthplace

7. Where did you grow up as a child?

8. What is your native language?

9. Which languages were spoken in your home as a child?

10. What other languages do you speak?

Personal History with Spanish

1. Years of studying Spanish? How many courses taken?

2. Number of years since last Spanish class?
At what college or high school did you last take a Spanish course?

3. Have you taken the placement test at USF? __Yes __ No
SPN ____1 ____2 ____3 ____4

4. How would you rate your listening, speaking, reading, and writing abilities in Spanish?

	Basic	Working Knowledge	Fluent
Listening			
Speaking			
Reading			
Writing			

4. Course requesting? EN LÍNEA Spanish ____1 ____2 Semester and Year
_____

5. Why are you taking this course?

6. What do you want to achieve in this course? What are your language goals?

7. What, if anything, restricts you from studying the language?

8. Did you take EN LÍNEA I? _____Yes _____No
     When?   Where?
     Who was your instructor?

9. Are you a native speaker of Spanish? _____ Yes _____ No

      Is your family of Hispanic origin? _____ Yes _____ No

      Do you already speak Spanish? _____ Yes _____

Personal History with Technology

Please check ALL that apply:
1.
____ I used computers in __ elementary, __ junior high/middle, __ high school
____ I use a computer at home
____ I presently have ready access (from work or home) to the Internet
____ I presently use computers *only* on campus (mainly where on campus?
_____)

2. I have used computers to
____ play games
____ do homework/word processing
____ browse the World-Wide Web
____ write computer programs
____ send E-mail messages
____ write in HTML for my own home page
____ other uses:_____

3. From the following list, mark all the situations in which you have used the Internet:
____ to read a bulletin board or news group
____ to transfer files
____ to write and send correspondence
____ to download files or graphic images
____ to participate in online discussion groups
____ to browse the World Wide Web (WWW)
____ to create and use my own 'home page'
____ other (please specify) _____

4. Mark all of the expressions which, at this point, best describe your feelings about the use of electronic technology in this online class:

Expected   frustrated   uncertain
impersonal   intrusive   excited
no big deal   open-minded   enthusiastic
time saving   inconvenienced   love it
time consuming   potentially addictive participatory
challenging   overwhelmed   useful skill
distracted   waste of time   expensive
inappropriate   too early to judge

5. Please indicate to what extent you agree or disagree with the following statements:
(SA=strongly agree, A=agree, U=undecided/unsure, D=disagree, SD=strongly disagree)

____I used technology often during high school.
____I use technology on a daily basis.
____I connect to the Internet on a daily basis.
____I consider myself capable when it comes to using technology.
____I consider myself capable when it comes to solving technology problems.
____I find using computers and the Internet to be helpful and useful for different aspects of my life.

6. What day(s) and time(s) do you think you will most likely work online for this course?

____Mon   ____Tues   ____Wed   ____Thur   ____Fri   ____Sat
        ____Sun

7. Where do you think you will most likely work online for this course?

____At home ____ Computer lab on campus   ____ On campus residence ____At work   ____Other, where? _____

Appendix E

Interview Questions

Personal History Interview

In this interview I will ask you a few questions about your student status and personal experiences with language learning and technology prior to taking this online Spanish course. Please respond with as much detail as makes you feel comfortable. If necessary, I will follow up with more questions for clarification. If at any time you feel uncomfortable answering a particular question, you may choose not to do so. Also, you have the right to end the interview at any time if you wish. Does that sound ok?

1. Could you describe yourself as a student? What is your major? Do you have a minor? What you do want to do with your degree?

   a. Are you currently working in addition to taking classes?

   b. Could you describe your weekly schedule?

   c. Could you describe your living situation?

2. Could you describe your previous experiences with learning Spanish?

   a. Have you ever used technology to learn Spanish?

3. What are your goals for this course?

   a. Are you taking this course to fulfill the foreign language requirement?

   b. Do you think that your previous experiences will help or hinder your success in this course? What makes you say that?

   c. Why did you choose Spanish as your foreign language?

   d. Why did you choose an online Spanish course and not a regular course?

4. Do you consider yourself capable when it comes to using computers?

   a. What makes you say that?

   b. What types of things can you do using computers?

    c.   What types of programs are you capable of using?

    d.   Do you ever experience any type of conflict when using computers?

    e.   How were you able to overcome this problem(s)?

5.   Please describe your experience with using the Internet.

    a.   What types of things do you typically do on the Internet?

    b.   Where do you feel most comfortable using computers?

    c.   What do you think is unique about this environment?

    d.   Do you ever experience any type of conflict when using the Internet?

6.   Have you ever taken another online course?

    a.   Could you describe this course?

    b.   Were these complete online courses?

    c.   Did you have any face-to-face meetings?

    d.   Could you tell me a little bit about how the course was structured?

    e.   Did you experience any conflicts in this situation?

    f.   Do you think that your previous experiences will help or hinder your success in this course? What makes you say that?

7.   Do you foresee having any trouble in this course?

    a.   Where will you complete the online materials?

    b.   Why have you chosen to work there?

    c.   When will you complete the online materials?

    d.   Why have you chosen to work on that day(s) at that time(s) of day?

    e. Why have you chosen to work on this schedule?

8. Is there anything else that you would like to add?

Interview #1

Personal Experiences

1. How does your job affect your participation in this course?

2. How does taking this course affect your job?

3. How has your course load affected your participation in this course?

4. How has the work load for this course affected your other course?

5. Has your working environment at home and in the library been adequate for completing the online exercises? Is there anything in particular that enables your completion of the work in these environments? Is there anything in these environments that makes it difficult to complete the online materials?

6. Would you normally work in the library to complete the online homework?

7. Could you describe your vacations/going out of town during the semester? How have they impacted your participation in the course?

Mediational Tools

1. What materials did you choose to buy for this course? Why did you choose these?

2. When you are working online how do you decide between using the physical text or an electronic resource online?

3. How many times do you do each section to complete the exercise? How long does it take you normally to complete the entire lesson each week?

4. How would you describe your use of the Accent tool bar? Do you use it frequently?

5. Are there any online tools that you use frequently? Why do you use these more?

6. Are there any online tools that you feel are not very helpful? What makes you say that?

7. If you could make changes to EN LÍNEA, what would they be? What makes you say that?

8. Do you use the automated feedback screens to help you complete the exercises?

9. Do you ever review instructor feedback after the lessons have been graded?

Regulative Behaviors

1. Would you say that my observation of you working online was an accurate depiction of what you would do normally?

2. How do you decide to redo individual exercises? When do you typically complete the second attempt?

3. How do you decide what sections to work on and in what order?

4. Do you feel that you try to learn the material before starting an exercise or do you start the exercise and then learn the material as you go to complete the sections? Why have you chosen to work in this manner?

5. While working online do you frequently toggle back and forth between screens? Why do you do this?

6. How do you select a partner to work with for recordings? How do you then decide when to work together?

Contradictions

1. Have you felt that the material in this course has been too easy?

2. How has your previous exposure to Spanish helped or hindered you in this course?

3. During the observation I noticed that you left out a few accents where needed, what do you think is the cause of this?

Student Perceptions

1. How do you feel that the ability to submit a second attempt affects the manner in which you complete the homework?

2. Do you feel that the tasks you complete online are relevant to real life needs in Spanish?

3. Do you feel that you are capable of finding the meanings of words or phrases that are difficult? What makes you say that? How do you go about doing this?

4. How would you describe yourself as an independent learner? What makes you say that?

5. Has anything frustrated you in the online course? Could you describe it in detail?

Interview #2

1. Where do you live in relation to the university?

2. How does that distance affect your participation in the course?

3. Did the distance impact your decision to take the course online?

4. Is there anything that restricts your access to the Internet?

5. How would you describe the instructors' role in this course?

6. Do you feel that the instructors interact with you in a manner which facilitated your learning in this course? What makes you say that?

Interview #3

1. Do you feel that you accomplished what you set out to do in this course?

2. What has been the most difficult challenge for you in this course?

3. Is there anything that you would change about the overall course? What makes you say that?

4. Have you gained confidence in your Spanish abilities?

5. Have you gained confidence in your ability to use technology successfully?

6. Do you feel that you have gained technology skills as a result of this course? Could you describe these skills?

7. Do you feel that you put more time into preparing for this course than you would have if you took a regular Spanish course?

8. Do you feel that your listening skills have improved as a result of the online activities?

9. Do you feel that your writing skills have improved as a result of the online activities?

10. Do you feel that your knowledge of Hispanic culture has improved as a result of the online activities?

11. Do you feel that your knowledge of grammar and vocabulary has improved as a result of the online activities?

12. Would you take another Spanish course online? What makes you say that?

Appendix F

Field Notes Template

Field Notes Protocol			
Participant:	**Setting:**	**Date:**	**Time:**
Researcher Notes	**Physical and Verbal Behaviors**	**Use of Mediational Tools**	**Contradictions and Disturbances**

Appendix G

Rubric for Identifying Contradictions and Disturbances

Activity system components affected (Rules, Subject(s), Community, Division of Labor, Object, Instruments, Outcome	Questions used to identify contradictions and disturbances:	Description and classification of the contradiction or disturbance
	Are there any disagreements between components of the activity system?	
	Are there any clashes of interest between components of the activity system?	
	Are there any errors, problems, conflicts, difficulties, failures, or disruptions?	
	Are there any misunderstandings?	
	Are there any breakdowns in communication?	
	Are there any deviations from the normal flow of work?	
	Are there any obstacles that interrupt the flow of work?	
	Are there any unexpected innovations made by the students or instructors?	

Rubric for Identifying Activity System Components

Activity System Component	Questions used to identify the activity system components:	Activity system components created from background survey and personal history interview.	Activity system components created from first interview and observation.	Activity system components created from the last interview and observation.
ACTIVITY	What sort of activity am I interested in?	Online language learning	Online language learning	Online language learning
OBJECT	Why is the activity taking place?			
SUBJECT(S)	Who is involved in carrying out this activity?			
INSTRUMENTS	By what means are the subjects performing this activity?			
RULES	Are there any cultural norms, rules or regulations governing the performance of this activity?			
DIVISION OF LABOR	Who is responsible for what, when carrying out this activity and how are the roles organized?			
COMMUNITY	What is the environment in which this activity is carried out?			
OUTCOME	What is the desired Outcome for the activity?			

Appendix I

Rubric for Describing Mediational Tool Use

Participant	Physical mediational tool used (not electronic)	Physical mediational tool used (electronic)	Description of tool usage- how was the tool used? What did it accomplish?

Appendix J

Review of Course Syllabus

Material reviewed	Rules (guidelines for what may or may not happen)	Division of Labor (organization of the community and its processes)	Community (individuals or groups, the social context or environment)
Course syllabus	-Students must register for course and lab -Course is only open to beginners -Students must earn a D or higher to take Spanish II -Students must attend orientation and 4 exams -Students must purchase materials -Students must submit homework by due dates -Incompletes (I) are only given for appropriate situations -Dates and locations for homework, exam reviews, and exams	-Instructor and TAs hold office hours -Instructor and TAs deliver exam review and administer exams -Instructor and TAs grade homework submissions and exams -Students contact instructor or TAs with questions or problems via email or phone -Instructor and TAs respond to student emails and phone messages	-University students -Department of World Language Education -EN LÍNEA instructor and TAs -Vista Higher Learning publishing company

Appendix K

Review of Permit Request Form

Material reviewed	Rules (guidelines for what may or may not happen)	Division of Labor (organization of the community and its processes)	Community (individuals or groups, the social context or environment)
Permit request form	-University students must explain personal experiences with knowing/learning Spanish -Students must attend orientation -Students cannot take EN LÍNEA II without taking EN LÍNEA I first -Students must adhere to the university Academic Dishonesty Policy	-Students complete and submit permit request forms -EN LÍNEA instructor receives forms and administers permits	-University students -EN LÍNEA instructor

Appendix L

Review of Foreign Language Requirement

Material reviewed	Rules (guidelines for what may or may not happen)	Division of Labor (organization of the community and its processes)	Community (individuals or groups, the social context or environment)
Foreign language requirement	-2 semesters of a beginning college-level foreign language or one semester of a higher-level course, earn a "C" (no "S" grades) or above or demonstrate equivalent competency by passing an examination, must be an approved language -Students with 2 or more years of study in a foreign language in high school, or with postsecondary course(s) in foreign language, or with experiential learning of a foreign language must take the placement exam	-World Languages department administers the placement exams	-University students -Department of World Language Education

Appendix M

Review of How to Join EN LÍNEA Instructions

Material reviewed	Rules (guidelines for what may or may not happen)	Division of Labor (organization of the community and its processes)	Community (individuals or groups, the social context or environment)
How to join EN LÍNEA instructions	-None described	-University students create Quia account, log into account, purchase book key, enter book key, and enter course code -EN LÍNEA instructor provides the course code -Vista Higher Learning and Quia.com maintain site and sales for materials	-University students -EN LÍNEA instructor -Vista Higher Learning publishing company -Quia.com

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Appendix N

Review of Textbook Purchasing Instructions

Material reviewed	Rules (guidelines for what may or may not happen)	Division of Labor (organization of the community and its processes)	Community (individuals or groups, the social context or environment)
Textbook purchasing instructions	-All major credit cards accepted -Package includes looseleaf VISTAS 3rd student edition and EN LÍNEA eCourse 2.0 - Shipping options include UPS ground or USPS priority mail - Florida sales tax apply on orders - Limit of one package per student - Returns within 30 days if package seal is unbroken, the book key has not been redeemed, and the package is in salable condition	-University students purchase materials -Vista Higher Learning manages site, sales, delivery of materials, and returns	-University students -Vista Higher Learning publishing company

Appendix O

Review of Technical Requirements Document

Material reviewed	Rules (guidelines for what may or may not happen)	Division of Labor (organization of the community and its processes)	Community (individuals or groups, the social context or environment)
Technical requirements document	-EN LÍNEA works best with: Microsoft Windows, Internet Explorer, cookies accepted, Macromedia Flash Player, Adobe Acrobat Reader, Shockwave Player, -Students must have audio and video capabilities -Students must have speakers and microphone -High-speed internet connection is recommended	-Students ensure that computer meets technical requirements -Vista Higher Learning provides technical support via phone and email -University support staff assists students with university computers	-University students -Vista Higher Learning publishing company -University technical support staff

Appendix P

Review of Department of World Language Education Website

Material reviewed	Rules (guidelines for what may or may not happen)	Division of Labor (organization of the community and its processes)	Community (individuals or groups, the social context or environment)
Department of World Language Education website	-None described	-Department provides instruction, research, study abroad opportunities, and outreach programs -Faculty and staff deliver instruction and serve as contact persons	-University students -Department of World Language Education -Department faculty and staff

Appendix Q

Review of EN LÍNEA Website

Material reviewed	Rules (guidelines for what may or may not happen)	Division of Labor (organization of the community and its processes)	Community (individuals or groups, the social context or environment)
EN LÍNEA website	-Taking EN LÍNEA Spanish II is restricted to students who have completed EN LÍNEA I -The EN LÍNEA courses require 5 campus visits	-University students apply for permit to register -EN LÍNEA instructor is contact person -Vista Higher Learning developed and maintains EN LÍNEA -Department offers the web courses	-University students -Communities served by USF -Department of World Language Education -EN LÍNEA instructor -Vista Higher Learning publishing company

About the Author

Joe Terantino completed a Bachelor's degree in Spanish and Secondary Education at Winthrop University. Upon completion of this degree he began teaching high school Spanish in South Carolina. Through his experience in teaching Spanish, he began to develop an interest in the use of computer-based technologies for language teaching and learning. Ultimately, this growing interest led him to the doctoral program for Second Language Acquisition & Instructional Technology at the University of South Florida.

While studying in the doctoral program Joe taught a variety of courses in foreign language education, TESOL, and Spanish. He served as the university's coordinator for the distance learning Spanish program, and he initiated the online delivery for the program's courses. In addition, he served as a university supervisor for foreign language teaching interns. Last, he has presented papers and instructional workshops at regional and national conferences.