ABSTRACT

SAMUELS, LAURA ELIZABETH. The Effectiveness of Web Conferencing Technology in Student-Teacher Conferencing in the Writing Classroom: A Study of First-Year Student Writers. (Under the direction of Chris M. Anson).

In the past few years, composition theorists have become increasingly interested in the role of computers in the first-year writing classroom. This explorative, case study investigates the use of Web conferencing software as a medium for student-teacher writing conferences. Using qualitative methodology, this researcher conducted out-of-class Web conferences with three first-year writing students about their performance on the first major writing project of the spring 2006 semester. The researcher was also the students' English 101 instructor. Following the Web conferences, the researcher used in depth interviewing techniques to discuss the students' experiences. Data from the recorded Web conferences and transcripts of the post-conference interviews were analyzed to determine answers to the following two research questions: What benefits and challenges do students and teachers find with online Web conferencing and how do these benefits and challenges affect the cyber replication of a face-to-face conference? The results of this study indicate that it is possible to replicate a face-to-face student-teacher conference through Web conferencing technologies. Some of the benefits of Web conferencing include (but are not limited to) the constant availability for students and instructors to have conferences (outside of the traditional business hours that most university buildings are available) and the ability to have an oral discussion in place of a text-based discussion, where it is often difficult for instructors to encapsulate complete feedback. Additionally, this study investigates some of the challenges to Web conferencing, such as the lack of a physical presence of the two participants and the inability to conduct global writing revisions due to the lack of screen

space available on the computer monitor. Finally, this study has important implications for conferencing in the first-year writing classroom and opens the door for future Web conferencing studies to be conducted on a larger scale with different population samples.

THE EFFECTIVENESS OF WEB CONFERENCING TECHNOLOGY IN STUDENT-

TEACHER CONFERENCING IN THE WRITING CLASSROOM:

A STUDY OF FIRST-YEAR STUDENT WRITERS

by

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Dedication

To my soon-to-be husband Brian LeBlanc, who has provided me with words of encouragement and support for the past four years of our relationship, and who is always willing to hop in the car and drive through the middle of nowhere just to see where the road goes.

To my parents Jay and Ellen Samuels, who raised me to always laugh and find the humor of every situation, and who encouraged me to take Honors English I my freshman year of high school, despite the fact that my middle school English teacher thought that I would struggle too much in the advanced course. Their sacrifices and enthusiasm for my education have helped make all my dreams come true.

And, to my sister Callison Samuels, who has shared her candy and toys with me since before she was old enough to understand the concept of sharing, and who can make me laugh with her photographic memory, hilarious one-liners, and constant imitations.

Thank you all for the many distractions that you have provided for the past two years. Without all of the countless Appalachian football and Hurricanes hockey games, I would have never remained sane as I completed this thesis.

I love you all.

Go Apps & Go Canes

Biography

Laura Elizabeth Samuels was born October 3, 1982 at Fort Bragg, NC. Shortly thereafter, Laura and her parents, Ellen and Jay Samuels, moved to Hickory, NC, her mother's hometown, where she lived for the next 18 years. After graduating from St. Stephens High School in May 2000, she enrolled at N.C. State University as a freshman in chemical engineering. By her sophomore year, she abandoned Riddick Hall and moved over to the English Department to pursue her true interest, writing. In May 2004, she graduated with a BA in English and a French language minor. After a summer of temporary jobs (including four weeks of shredding old files for the Electron Microscopy Center), she began the MA in English program with a teaching assistantship. For the 2004-05 school year, she served as a graduate consultant for the Campus Writing and Speaking Program and participated in the First-Year Writing mentoring program. For the 2005-06 school year, she taught English 101: Research and Writing in the Disciplines. She was a recipient of the 2006 NCSU English Department Outstanding Teaching Assistant Award. She plans to graduate in May 2006.

Two weeks after graduation, she will travel to Oak Island, NC where she will marry Brian LeBlanc, who she met in April of her sophomore year at N.C. State. One month after the wedding, the two of them will drive to Miami to board a cruise to the Bahamas. They will wait a month to go on their honeymoon because they want to be sure to be in Raleigh for the duration of the Carolina Hurricanes' 2006 run to the Stanley Cup Finals. After the wedding, they will live in Raleigh.

Acknowledgments

I would like to thank Dr. Chris Anson for his support throughout the creation of this thesis and for his initial suggestions that helped the final topic come into fruition. I'd also like to thank Dr. Deanna Dannels and Dr. David Rieder for serving on my committee and for their support and suggestions throughout the process. Everyone's versatility was much appreciated.

Thank you to my three anonymous English 101 students, who agreed to participate in this study. Without their help and commentary, this thesis would not have been possible.

And finally, I'd like to thank my fellow English 101 TAs, Jennifer Johnson, Melanie Hair, Rebecca Hayhoe, LaRonda Sanders, and Kristine Forrest Seawell, for their support and friendship for the past two years. Without all of the lunches on Hillsborough Street and the complaint sessions in our cubicles, it would have been a long two years in Tompkins Hall. I've never had so much fun while doing so much work.

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Introduction

Technology ... the knack of so arranging the world that we don't have to experience it.

- Max Frisch

When Swiss author Max Frisch published the above quotation in his 1957 book *Homo Faber* he was not talking about the Internet, computers, or any other number of multitudinous technology that has since been invented. Most likely, Frisch was referring to television, radio, and other two-dimensional technological inventions that were beginning to flood the world in the middle of the 20th century. Indeed, these two-dimensional inventions were creating a world where people could live vicariously through the nightly news or their favorite soap opera characters. With the advent of more recent technology, however, many of the above experiences are being replaced with more multi-faceted experiences where users can interact with one another through their computers and different applications. These new technologies are creating profound changes in the delivery of instruction across the landscape of education in the United States.

The study outlined and analyzed in the following chapters of this thesis details one such way that technology can be manipulated to provide a cyber experience that is comparable to that of a traditional in-person experience. The present study uses Web cameras and microphones, in conjunction with other software programs to create an online writing conference between a first-year writing student and his or her writing instructor. I acted as the primary investigator and instructor and three students in my first-year writing course were the student participants.

As a new instructor of a first-year writing course at a major Research I university, I teach a variety of students in many different majors, ranging from animal science or chemical

engineering to political science or English. As a result, I am constantly revising how I teach

my first-year composition course in order to better fit the needs of my students. As such, it is

important for me to think about the things that are common to all of these students' lives and

to use these commonalities as an effective way to teach writing. One of the first things I

noticed while teaching is how entrenched these students are with the Internet and their cyber-

lives. For example, as I was preparing my first syllabus, for my composition course, which is

taught in a computer-enhanced environment, I was warned by a few seasoned instructors that

I would need to address Internet conduct in the participation section of my syllabus to

explain that students should not use IM during the lectures or class discussions.

Additionally, I also began to notice that before class, immediately upon logging in to a

computer in the computer lab, most students were quickly checking their e-mail or logging

into a Web site called Facebook.com[1] to see if they had received new requests for friends or

if other users had commented about them on their Facebook profiles. As I was teaching

during those first few weeks, I realized that Internet communication was **the** primary source

of communication for most students at N.C. State. As a result, I began to think about the

possibilities of using these technologies pedagogically. For example, I decided to register an

online screen name with a popular instant messenger service and I told students that I would

be available online during my office hours and on the nights before major projects were due.

I explained that the purpose of using IM was not to engage in long discussions that were

better reserved for student-teacher conferences, but, instead, to use IM when students had

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[1] Facebook.com is an Internet Web site designed primarily for college students, where users can create an online account, post their pictures to their profile, and then search for other users who they know. Users' friends are then grouped according to commonalities, such as enrollment in the same class or attending the same high school. Essentially, Facebook.com is a way for college students to network with new friends and keep in touch with old friends.

quick questions about their writing. Many students were excited about the possibilities of having an instructor available to them from their dorm or home, where they could chat in real time, as opposed to the delays often associated with asynchronous communication, such as e-mail. I found that many students found the experience useful and enjoyed talking to their instructor in a not-so-structured environment. These students were much more honest about their participation in the classroom and their questions and comments seemed much more sincere than how they appeared during class. Something about the medium and its informality broke down some of the traditional barriers to student-teacher conversations and the students' comments reflected this change. Many students who were often quiet during class time had no problems asking me questions or making comments to me online. As a result, I felt that I was able to learn more about these students as we chatted online and the students began to feel more comfortable speaking up during class.

Since my students were responding positively to their IM experiences and I was beginning the preliminary stages of topic selection for this thesis, I started thinking about ways that the use of IM could be expanded, in and out of the classroom. I realized that I was able to use a medium in an academic setting that my students were using daily in their personal lives and I wanted to capitalize on this connection. In a meeting with Dr. Chris Anson, he brought up the idea of using Web conferencing technologies in the classroom. Through discussions with him and my thesis committee, the basis of this study was born. Like Frisch implies in the quotation at the beginning of this chapter, experiencing the world is integral to all people. Therefore, in the writing classroom, the face-to-face conferencing experience is integral for all student writers. My goal was never to replace the traditional face-to-face student-teacher conferencing experience. Instead, I wanted to find a way to

supplement the traditional experience with technologies that students were using daily in their personal lives, the hope being that by supplementing the traditional experience, students would be able to transfer some of the emotions they felt during our informal IMs to the Web conference. Additionally, if Web conferencing were to be successful in academia, then there would be multiple implications for distance education learners and all other writing students.

Before I continue much further, it is necessary to define a Web conference. A Web conference consists of a Web camera and a microphone connected to a computer, used in conjunction with an instant messaging program and other software programs that allow two or more users to hear and see one another as they communicate in real time. Web conferences[2] are popular in the business world and in other communities, but their full potential has not been explored in academic settings. As a result, this qualitative study helps to create a niche for the Web conference in academia that can be modified and redesigned by other composition scholars and researchers. It is an explorative, case study that concentrates on a small population sample in order to help explore some of the possibilities of Web conferencing in the writing classroom. Since there is very little previous research conducted that directly relates to Web conferencing in academia, there are very few scholars to reference and study. As a result, this thesis attempts to look at past trends in composition research (such as the integration of other technologies into the composition classroom) to help discuss the possibilities and implications of the present study. In addition to these past trends, this thesis begins with a discussion of the traditional methods of student-teacher conferencing and feedback, in order to help place this present study in its appropriate context for future scholars to reference as they further the integration of technology into the Web

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[2] For the purpose of this thesis, the term Web conference will refer to its use only in the academic setting as an online student-teacher meeting.

conferencing experience. Once the traditional face-to-face writing conference is properly established and contextualized, Web conferencing can then be appropriately analyzed and discussed.

Student-instructor conferencing is an integral part of the writing process. In fact, many first-year writing programs (N.C. State University included) have program-mandated policies regarding student-teacher conferencing. N.C. State's First-Year Writing Program's policy reads, in part, as follows:

> Because writers' skills develop in different ways and at different rates, good writing instruction is individualized instruction. ENG 100 and 101 instructors should conference with students as often as practicable, individually and/or in small groups. … Intended to supplement, not replace, classroom instruction, individual conferences are an essential pedagogical tool for writing instructors at all levels.

Similar policies are in effect in first-year writing programs throughout the United States, which indicates that most university writing programs are concentrating on this student-centered learning environment. Writing conferences, in some respect or another, have existed in the United States since at least the 1890s. In a November 2005 issues of *College English*, Neal Lerner provides a discussion of writing conferences during four particularly important college enrollment periods in the United States: the 1890s, the 1930s, the 1950s, and the 1970s. In his article "The Teacher-Student Writing Conference and the Desire for Intimacy," Lerner explains that the goals of student-teacher conferences "have always been ambitious" with the main purpose being "to teach writing more effectively" (203). Additionally, for instructors, there have always been ulterior purposes for student-teacher conferencing, such as creating "meaningful relationships with an increasingly diverse student body or at least one that was increasingly different from the teaching class" (203). Lerner

thoroughly chronicles how the field of composition has been affected by the history of student-teacher conferencing. Writing conferences are about making connections between instructors and students, connections that can never quite be established in the traditional classroom. Additionally, writing conferences are also small microcosms of the entire teaching composition process. As Lerner asserts, conferences show "our hopes and dreams as teachers … our successes and failures" and provide a window into "the limits of writing instruction and its endless possibilities"(206). Therefore, by studying student-teacher conferencing and by researching ways to improve the conference experience for all participants, the entire field of composition is continually improved and revised.

In particular, Lerner references Donald M. Murray whose 1970s watershed essay "Teach Writing as a Process Not Product" helped promote the importance of student-teacher writing conferences. In the essay, Murray outlined a series of ten implications to help instructors begin concentrating on the writing process as opposed to valuing a finished product. While many of today's universities are returning to value the finished writing product over the entire writing process, most programs still echo many of Murray's implications as they try to find an appropriate balance between the two pedagogies. Perhaps one of the most important of Murray's implications is No. 9 which states, "the students are individuals who must explore the writing process in their own way, some fast, some slow, whatever it takes for them, within the limits of the course deadlines to find their own truth" (6). Murray's implication calls for individualized instruction for novice writers and encourages the students to explore on their own, with the guidance of their instructor. By exploring on their own, Murray explains that students will better understand all of the writing

process and will be better prepared to alter their own processes according to their personal preferences.

Murray's essay begins to touch on some of the many practices that make student-teacher conferencing effective. One of those practices is providing effective oral feedback for students during the student-teacher conference. Correspondingly, Eric M. Wiltse's study "Correlates of College Students' Use of Instructors' Comments" in a 2002 issue of *Journalism and Mass Communication Educator* continues along the same lines as Murray's essay as he discusses how college-level writers interact with instructor commentary. Most of Wiltse's study provides us with discussion of written comments from instructors, but many of his findings can be applied to writing conferencing in general. Perhaps one of the most important things that Wiltse and other composition researchers noted is that it is particularly important for instructors to not overload their students with too much commentary. In doing so, students are much more likely to ignore their comments and they may often delete passages rather than revise them according to the instructor's suggestions (128). This phenomenon is particularly important for instructors to remember during face-to-face conferencing. Students can only remember so much about a given section and even if they take substantial notes during the conferences, they still may become confused or forget important comments made during the writing conference. As a result, instructors should limit their commentary to succinct comments that the students can easily digest and understand in the conference setting. Additionally, Wiltse discusses the importance of promoting a student writer's self-confidence (128-9). Confidence plays a big role in how students approach feedback and revisions. A student who lacks self-confidence may become quiet during a conference, which forces the instructor into a speaking-role as opposed to the

traditional listening role that most instructors want to achieve in their conferencing. Therefore, when an instructor is conferencing with a student about a paper, it is important for the instructor to mention positive aspects of the paper, in addition to aspects that need further revision. Students will begin to feel more comfortable in their role as a writer and they will become much more open to instructor criticism and feedback. Additionally, as students become more confident in their writing abilities, they will be less anxious when meeting with an instructor in a one-on-one environment. The student will feel much more comfortable at conversing with the instructor, as opposed to relegating themselves to a role where they must simply listen and take notes.

In addition to balancing out positive comments with suggestions for improvement, Julie Neff Lippman suggests in "Assessing Writing," a chapter in *Concepts in Composition: Theory and Practice in the Teaching of Writing*, a book designed for new instructors of writing courses, that instructors need to be sure that they address global issues before local issues (209). That is, instructors need to concentrate on structure, organization, thesis statements, tone, and purpose, before they worry about issues such as diction, syntax, punctuation, or spelling. Indubitably, it is difficult for many instructors to avoid pointing out every comma splice or incorrect use of the word "their," but in concentrating on global errors first, instructors can help focus students toward the most important parts of their papers—the ideas. Like Wiltse, Lippman is concentrating primarily on written feedback, but the same holds true for oral feedback as well. Student-teacher, or student-student, conferences should not become a proofreading session for the student writer. Doing so does not help the student develop self-confidence as a writer and it does not help the student concentrate on the most important aspects of the writing process. Lippman suggests that instructors should develop a

special language for feedback that they should use throughout their commentary, both written and verbal (209). By approaching feedback in this manner, students can easily learn what the instructor means by his or her comments and students will then be able to constantly apply those comments throughout their papers. In the face-to-face conference, this language becomes equally important for students' learning because it provides them with tangible language to use when talking about their writing. Most students do not have the intrinsic ability to talk about their writing in the academic tone that they see instructors use; therefore, by providing students with this "language for feedback," as Lippman terms, students will be able to speak confidently about their writing as they discuss specific aspects of a paper with their instructors (209).

A final discussion of conferencing is raised by Daniel V. Eastmond in is 1992 article "Effective Facilitation of Computer Conferencing," which appeared in *Continuing Higher Education Review*. In this article, Eastmond discusses some of the best strategies for instructors when they are engaged in computer conferencing. Eastmond's discussion of technology is obviously outdated for discussion in the present study; however, many of his suggestions are central to traditional, face-to-face conferencing environments. In particular, Eastmond argues that it is important for instructors to value "egalitarian leader[ship]" for both students and instructors (26). By establishing an environment where students feel as comfortable as possible when conversing with their instructors about their written work, students can "take control" of the writing conference and lead it into a specific direction. Instructors must be willing to relinquish this control, so that they can provide their students with a learning environment that is conducive for conversations that allow the student to feel as if he or she can fully express his or her thoughts.

Eastmond also suggests in his article that when someone is facilitating an online distance education class that it is often helpful to weave, "which is defined as 'to summarize the state of the discussion and to find unifying threads in participants' comments; it encourages these participants and implicitly prompts them to pursue their ideas" (Feenberg qtd. in Eastmond 31). Weaving would also be particularly useful in any type of face-to-face interaction with a student. An instructor can use this technique at the end of a conference to help summarize the conference for the student and remind the student what suggestions both participants made during the conference. As Eastmond indicates, in doing so, instructors can encourage students to go off on their own tangents as they return to their papers during the revision process. By not attributing opinions to anyone during a weave, students would remember the ideas and not the original author of the ideas. Additionally, students might not see the end of the conference as the direction that their paper should take. Instead, by weaving all of the information up, the instructor can help the student see the conference as a collaborative invention session, as opposed to a strategically laid out session where the instructor is attempting to coerce the student toward a specific direction. As previously stated, the implications in Eastmond's article can be applied to both face-to-face and Web conferencing.

The preceding discussion attempts to provide a brief introduction to the types of pedagogical standards that are typically employed in face-to-face writing conferences. Lerner sums up his article by asserting the all-too-common claim that, "it has always been a case of too many students, too little time, too much writing, [and] too few dollars" (203). Lerner is correct in his assertions and many of the items that he noticed in his article are still evident today in the early 21st century writing classroom. There are too many students, there

isn't enough money, and there will never be quite enough time to devote to each and every student. However, the research study outlined in the following chapters of this thesis provides one suggestion for the student-teacher conferencing experience that may help minimize the issues laid out by Lerner. The field of composition is at an important time and place. We are teaching more students than ever before, in a learning environment that is often clouded by sensory overload and millions of distractions. However, if we can grasp some of these distractions and redevelop our pedagogies so that we can reach more students outside of the typical constraints of a brick and mortar office and classroom, then we will be better able to help these students become stronger and more confident writers.

Chapter 1

Background

The Web conference is an experience that is created by a combination of different technologies and software programs. By using these software programs in conjunction with one another, Web conferencing participants create an environment that is as near to a face-to-face meeting as possible. Therefore, to completely understand the Web conferencing experience, it is important to understand all of the different technological components and how these components are used in non-academic settings. As a result, I provide in this chapter an introduction to the technical equipment and software used and how these Web technologies can be combined to create a complete Web conferencing experience. At the conclusion of the chapter, I provide a brief discussion of the use of previous technologies in the writing classroom and I discuss how this previous knowledge can be applied to Web conferencing in the writing classroom.

1.1 Instant Messaging (IM) and Chat Clients

While e-mail and electronic message board postings, which become popular in the mid 1990s, were important steps for online correspondence, users quickly lamented the fact that these correspondences were asynchronous and did not flow like that of a face-to-face conversation. Responding to these complaints, popular Internet service providers (ISPs) at the time (such as American Online, Prodigy, and CompuServe) began to launch instant messaging clients with their Web browsers that allowed users to communicate synchronously with each other by typing statements into the browser that would appear (with a very short delay) on the other user's monitor (Tyson). One of the major barriers with these ISPs was

that their chat clients were not compatible with other clients. For example, a user whose household subscribed to AOL for their Internet service would not be able to chat with his or her next door neighbor if that household subscribed to Prodigy (or any other ISP). In 1996, Mirablis, a company independent of ISPs, created ICQ, "a shorthand phrase for 'I Seek You,'" which was free for anyone to download on their computer (Tyson). Through the use of this program anyone, regardless of the ISP, could chat with anyone who had ICQ installed. Almost immediately following the release of ICQ, AOL released AIM, which was similar to ICQ in that anyone could download the AIM client and chat with any other AIM user. One additional improvement with AIM was that users could also chat with anyone who had AOL as well. Following these developments, other companies such as Microsoft and Yahoo! began to release their versions of chat clients. While there are some programs that can be downloaded to enhance chatting and allow users of different clients to chat with one another, the majority of users have only one chat client and just use that client to communicate with their friends and family.

As previously mentioned, Microsoft quickly became interested in the potential of IM and launched MSN Messenger (MSN). This client is packaged with all Windows operating systems (under the name Windows Messenger) and, therefore, is readily available for use for anyone who uses Windows and has access to the Internet. Additionally, this client is available for download off the Internet, so even those people who do not use Windows (such as Mac and Linux users) can download an appropriate client for their machine and chat with other MSN users. For this reason, I decided to use MSN as the chat client for the Web conferences that I conducted for this project.

Once the chat client is installed, the user will sign up for a free account with their e-mail address (Microsoft also offers free e-mail addresses through their Web-based e-mail client Hotmail). Almost instantly the account is established and the user will be able to chat with other users. MSN and other clients offer easy searches to find a random people with whom to chat; however, you can also type in an e-mail address (of a known MSN user) to find a specific person. When an MSN user logs in to their MSN client the first window that appears is called the "MSN Messenger Contact List."
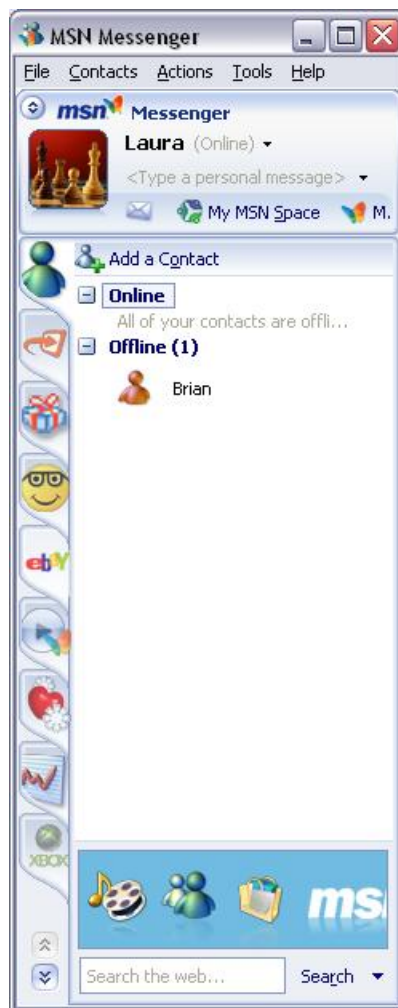
Figure 1.1 "MSN Messenger Contact List"

From this list, an MSN user can see all of his or her contacts. These contacts can be

categorized into different groups, such as Family, Friends, or Colleagues, and within that

group the user can see who is online and who is offline. For example, in Figure 1.1, my

contact list shows that I have only one contact "Brian," who is not currently online. Once

Brian logs in to MSN, my contact list shows that he is online and is available for chat[1].

When we are both online, I can click on his name and begin to chat with him.

Figure 1.2 "MSN Messenger Chat Conversation"

As evidenced in Figures 1.1 and 1.2, many companies such at eBay and Bank of America

have embraced the world of IM and have paid money to Microsoft (and other chat clients) to

advertise their businesses. While these advertisements can be a nuisance (especially if they

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[1] Most IM programs have features available that allow you be online, yet unavailable for chat. In many cases, this is called "being away." In those cases, the contact list for those users who have your screen name will show that you are online, yet doing something else that prohibits you from chatting at that time (i.e. watching TV, writing a paper, playing a video game, etc.).

are embedded with sound or video clips), they are necessary so that the clients can continue to offer their services for free. Figure 1.2 also shows the disclaimer by MSN that you should: "Never give out your password or credit card number in an instant message conversation." This reminder exists for users because IMs are very rarely encrypted and as a result, a hacker could possibly be watching you or your fellow chatter and use sensitive information to their advantage.

There is no limit to the amount of time that a chat can exist. The chat will continue in the same window for as long as that window is open. However, once the chat window is closed, that chat will be gone forever. You can save a chat to your hard drive if there is information contained that you may need later, but without the save that chat simply disappears. Additionally, one user can be chatting with many other users at a time. Each user will only be able to see the conversations in which he or she is participating. IMs are usually limited to only two participants; however, if there are three or more users who wish to chat, they can start a chat room where multiple users can chat with one another.

While there are some chat clients that only allow you to type to each other (that is, text-only clients), most clients will also allow you to send files from one user's hard drive to the other's hard drive or send pictures or sound files directly through the client. These types of exchanges can enrich chats. One particular chat feature that MSN uses in conjunction with its chat client is called "Whiteboard." This feature allows users to open up a window that they can both see. The window looks like a blank dry-erase, whiteboard that you would see in a traditional classroom.
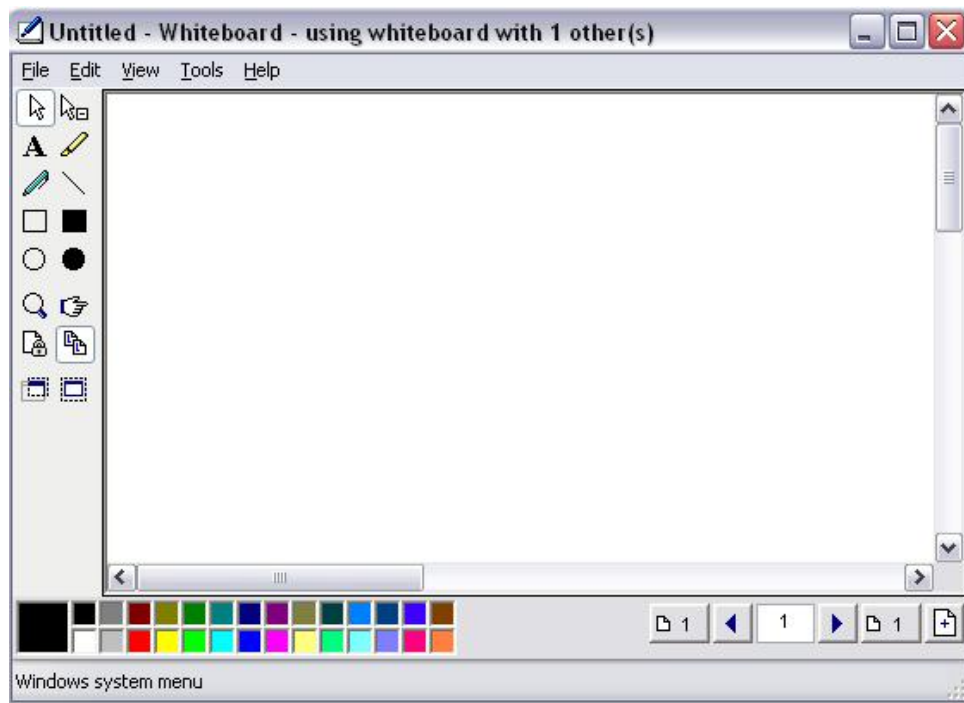
Figure 1.3 "MSN Messenger Blank Whiteboard"

Both users can then simultaneously draw a picture on the board that will appear on each

user's screen synchronously. As shown in Figure 1.4, the ability to draw a picture improves

functionality during a chat because it can help one user visualize what the other user is

attempting to explain. In addition to drawing a picture, Whiteboard can be used to

brainstorm a list of ideas (for example, possible pre-writing suggestions) or other things that

need to be remembered from the chat. Whereas an IM disappears forever once the IM

window is closed, the Whiteboard screen prompts the user to save the picture before closing

the window. Once saved, the picture can be recalled over and over when needed.

Additionally, you could end a chat one day, start a new chat the next day, load a saved

Whiteboard file, and continue where you left off the day before.
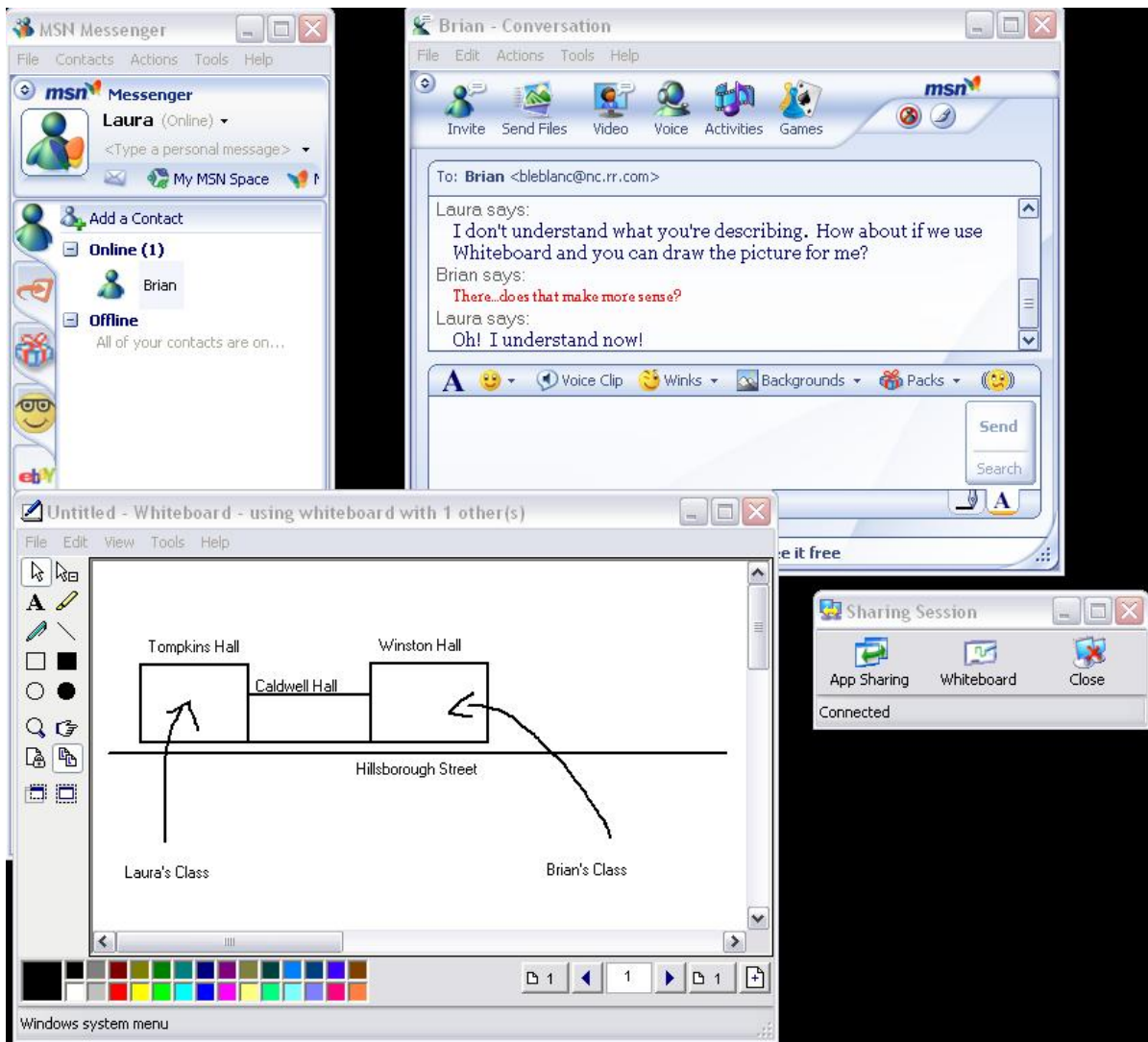
Figure 1.4 "MSN Messenger Whiteboard Drawing"

In order to experience chats better many users choose to customize their experiences

by changing the color, size, and font of their type (note the colors of Laura and Brian's fonts

in Figure 1.4). These users can also associate icons[2], or small pictures, with their user names

that are displayed in all of their chats with other users. Finally, many chat users also have

profiles or bios, which are very-small Web pages (usually no more than 500 characters) that

are linked to the user's account. These profiles allow the user to tell other users about their

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[2] An icon, sometimes referred to as a Buddy Icon, is a very small graphical image that is often used in chatting. This image can be a picture of the user or any other picture that the user chooses to associate with his or her account.

life, interests, or anything that they prefer. These different customizations allow other users to learn more about a particular user and also help users add their personalities to their chats, which helps users feel as if they are actually talking to another human being, and not simply a machine.

1.2 Web Cameras

In the early 1990s, when instant messaging was just becoming popular there were very few customizations available to users due to technical limitations. During these days, nearly all Internet users accessed the Internet from modems and dialup ISPs. These connections, although considered fast in their day, were much slower compared to how most users access the Internet in 2006. Today many users (including most major universities and colleges) use broadband connections to access the internet. Dialup access requires a modem and a phone line to access the Internet, whereas broadband connections use cable modems and DSL modems. Dialup Internet access is known notoriously for being much slower than broadband access. Because broadband access has become more readily available through cable and phone companies, many Internet users choose to spend a bit more money and access the Internet through broadband connections. As a result, the Internet has been flooded with Web sites that are laden with large image and sound files. Users who access the Internet through dialup have trouble accessing these Web sites because it simply takes their modems too long to download the pages.

One way that Webmasters, Internet users who build Web sites, have used broadband access as a way to improve their Web pages is through the use of Web cameras (Webcams). Webcams are small, portable devices that hook to the computer. The camera (acting much like a typical camcorder) records the images it sees to a video file. Additionally, when a

microphone is also hooked up to the computer, the Webcam will record sound files as well. Many Websites display Webcam images (that refresh every 10-30 seconds) on their Websites so that users can log on to the Web site and see what is happening. Many entertainment and sports arenas and radio stations employ Web cams so that Web site visitors can see what is going on in the arena or in the studio.

As Web cams have become much more popular in the past five years, many Internet users began to see the value of utilizing a Webcam during chat. In particular, this phenomenon was pushed by companies, such as Microsoft, who began developing software for video conferences in the corporate world. Many of the cameras employed by corporations were much too expensive for the average home user. As a result, computer-accessory companies, such as Logitech, began mass-producing a wide variety of Web cams for the home consumer. The Web cams vary widely with respect to cost and quality, but an average home user can generally find an adequate Web cam that produces a picture of a decent resolution for around $50. There are still a few more technological inventions that will need to be implemented before a Web cam will be able to produce large images with a great resolution, where there is little delay between image and sound; however, there are affordable Web cams currently on the market that produce little delay between picture and voice at a resolution of 320 by 240 DPI.

One such Web cam is the Logitech QuickCam IM, which is the Web cam that I elected to use for this project. This specific camera was designed to work primarily with instant messaging clients and as a result it is easily integrated into chat. The camera connects to the computer through a USB port and is essentially a plug-and-play device making it easy to use for even the most novice of users. As shown in Figure 1.5, the camera is small,

weighing only a few ounces and easily sits on the top of a computer desktop or laptop

monitor with the aid of an attachable, flexible clip.

Figure 1.5 Logitech QuickCam IM (Logitech)

Additionally, packaged with this particular camera there is a small earpiece with a built-in

microphone, which makes it easy to have a conversation over the computer without any

sound feedback from the computer's speakers. When integrated into an instant messaging

screen, both users can see each other's faces and talk to each other in real time, while still

retaining the chat and Whiteboard features available in a traditional chat. The integration of

the Web cam with the chat client allows the users to carry on a conversation similar to how

they would communicate in a face-to-face conversation. Typically, the text boxes for the IM

screen and Whiteboard provide a handy way to take notes or anything else where it may be

necessary "to write" something for the other participant. The beauty of these online

conversations is that they remain clear, regardless of the distance between the two users, as

long as each user is utilizing an ISP with broadband access.

1.3 Remote Assistance/Remote Access/Application Sharing

Remote assistance is a feature integrated into all Windows operating systems from

Windows XP and beyond. This feature was designed by Windows to allow more

experienced computer users to help less experienced computer users with their technological

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problems without needing to be physically present at the novice user's machine. Through a series of prompts (that are conveniently accessible through menus in MSN), a user (herein, referred to as the "first user") can give another user (referred to as the "second user") permission "to take control" of the first user's screen. The first user can check off a list of software programs (for example, Microsoft Word) that it wants "to share" with the second user. Once these permissions have been granted, the first user's desktop will appear in a window on the second user's screen. The second user can then use the first user's machine as if he or she was sitting at the first user's computer. Figure 1.6 shows a captured image of Brian's desktop (the second user) as he controls Laura's computer (the first user) through remote assistance.
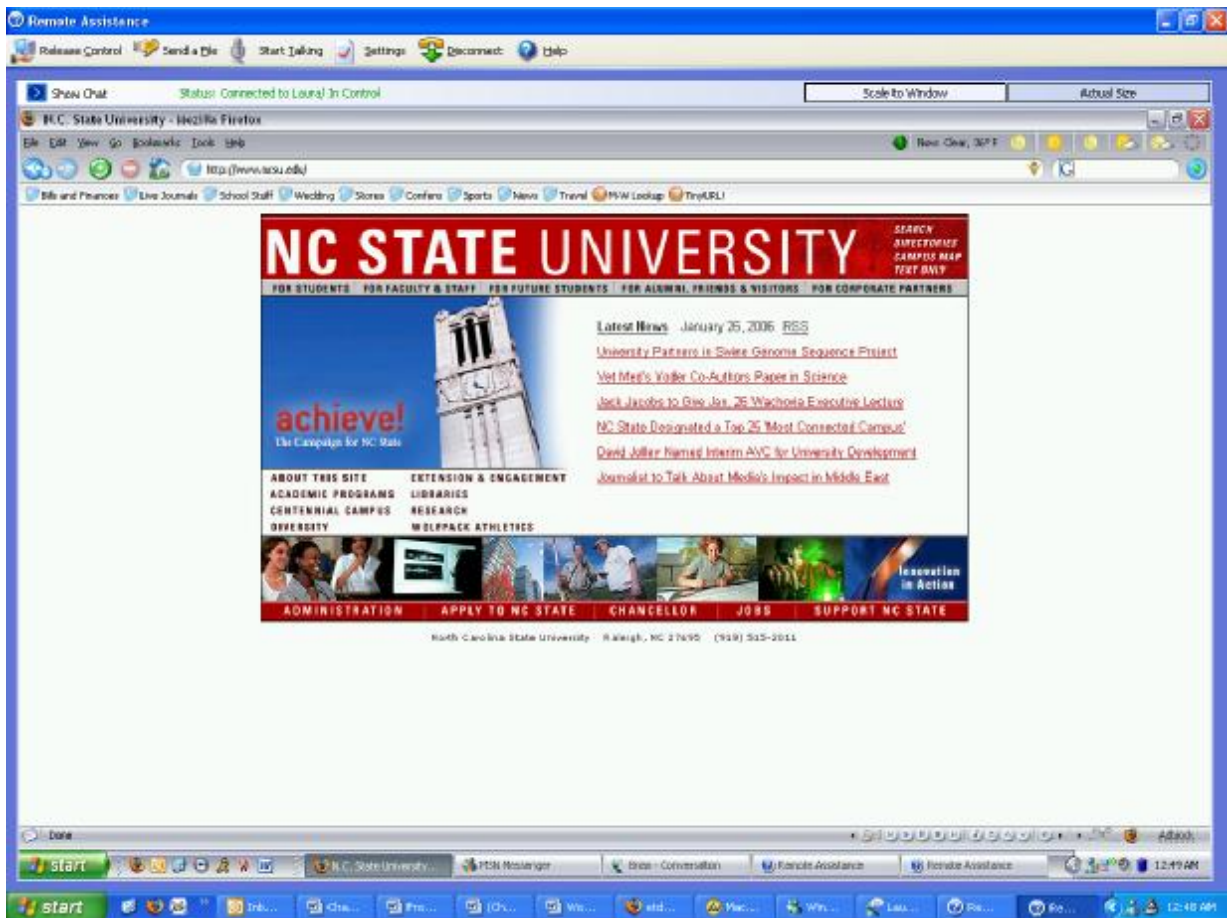
Figure 1.6 "Remote Assistance Screenshot"

Although somewhat difficult to read, due to size limitations on the image, the light-blue border with the Windows task menu at the very bottom of the screen is Brian's (the second user's actual desktop). Encased inside his desktop in the platinum-color border with the Windows taskbar (the second from the bottom) is Laura's (the first user's) desktop. In this view, Brian has full functionality over Laura's Web browser and the files located on her computer.

When remote assistance is used in conjunction with a video conference, both users can be talking to each other in real time as the second user makes notations or revisions on the first user's computer. Since the first user's computer absorbs all of these changes as if it was the first user making the alterations, a quick save of a file will preserve the revisions after the remote access and instant messaging sessions are over. In addition, if preferred, the second user can simply watch what the first user is doing on his or her machine and could make vocal commentary through the video conference.

1.4 Screen-Recording Software

Although screen-recording software is not a necessary component for any Web conference, it could be used to enhance to video conferencing experience. Essentially, screen-recording software is an independent software program that runs in the background of the computer. The software records everything that appears on the user's computer screen, including typing and mouse browsing, as well as any sounds that are uttered into the user's microphone. The program then writes this recording into a video file that can be saved and played back at any time. For the purposes of this project, I used TechSmith's Camtasia Studio as my screen-recording software. I will be primarily using this software as a way to revisit my recorded Web conferences, in order to provide enhanced study and discussion of

what occurred during each writing conference. For practical purposes, this software is particularly helpful because it allows me to study and analyze my Web conferences after the fact. In addition, because the screen-recording software is actually loaded on the computer (as opposed to a separate video camera that is can be constantly viewed as an imposition to the conference) the recording intrudes very little on the actual proceedings of the writing conference. In fact, it's only noticeable intrusion is that the screen blacks out completely for about five seconds when the user hits record and repeats the blackout once the recording is stopped. During the actual recording, a small indicator button is noticeable at the right-hand side of the task bar at the bottom of the Windows screen. This button alternates colors between red and green when it is recording and remains red when it is not recording. As previously mentioned, screen-recording software isn't necessary for a typical online video conference; however, it could useful for users who would like to record the entire conference and replay it later to refresh their memories about the events of the conference or to replay it for a different audience at a later time. Essentially this software could allow a user "to take notes" on a Web conference without needing to stop any of the action to ensure that everything is being covered.

1.5 Implementation in the Writing Classroom

Thus far in this chapter, I have referred to instant messaging and Web conferencing in its generic form; that is, how it is used by the general population in its free time. Now that a complete discussion has been given about the possibilities of online communication, it is important to discuss how these technologies can be implemented into the writing classroom. The field of composition studies has been particularly embracing of the implementation of technology into the writing classroom. Although schools and universities have been teaching

students to write for hundreds of years, the field of composition is still relatively new. Because of the young age of the field, it is often willing to embrace new technologies and pedagogies. There have been books and articles published that discuss nearly every facet of the writing process and how it has been, is, or will be affected by the implementation of computers into the writing process. By providing a brief survey of how other composition theorists have written about the introduction of new technology in to the writing classroom, I will establish how the knowledge gained by these former introductions will help future instructors introduce Web conferencing into their classrooms.

1.5.1 Physical Space, Student Anxiety, and Student Personality Types

Perhaps one of the first questions that instructors ask when investigating the use of technology in place of face-to-face communication is how the physical separation of the instructor from the students affects the learning process. Indubitably, lack of physical proximity does affect the communication process in different ways. However, whereas many instructors automatically view this lack of physical presence as bad, we will see in the present study, that this lack of physical presence can also be positive for some student participants. Correspondingly, Tisha Bender (2003) addresses this same phenomenon in her book *Discussion-Based Online Teaching to Enhance Student Learning: Theory, Practice and Assessment*, when she explains that "it is not the physical distance that is our concern, but the relational distance between the teacher and student" (6). In other words, Bender explains that physical distance is not nearly as important as the emotional distance that students feel from their instructors. In large lecture classes, very rarely do students feel an emotional connection to their professors. As a result, if an instructor attempts to facilitate an emotional connection with a student, then that connection will transcend the lack of a

physical connection or physical distance and the student will still be able to fully engage with the class materials. Bender's comments are important to consider when thinking about student-teacher conferencing. Obviously, students will feel much more comfortable meeting with an instructor with whom they have had an emotional connection. Therefore, if an instructor establishes this connection with his or her students during class or face-to-face writing conferences, then, most likely, those emotions will also transfer to the Web conference setting where the student will also be able to speak comfortably about his or her work.

In addition to the benefits that students may experience when they are physically separated from their instructor during a Web conference, there are also many benefits for instructors when they are conferencing with students from their own home. In *Issues in Web-Based Pedagogy: A Critical Primer*, Bender writes a brief chapter on how to appropriately facilitate discussion in an asynchronous environment. In this chapter, Bender cites some of the many benefits of asynchronous learning. Obviously, Web conferencing is a synchronous interaction among instructors and students, but some of Bender's comments also resonate particularly well with Web conferencing. For example, Bender explains that in an asynchronous discussion it is possible to log online at anytime when you have a brilliant idea that needs to be contributed (386). This is also somewhat true in Web conferencing. If students are e-mailing the instructor questions or talking to the instructor via IM and the instructor need to explain something to them that is better told, instead of typed, then it is easy for both the instructor and student to open up a Web conference and have a quick, mini-discussion. This impromptu conference could occur at any time and does not require that the student set up a time to meet with the instructor outside of class nor does it require that the

instructor wait until the next class period to speak with the student. These freedoms from time and spatial constraints would be particularly helpful when a paper or project is due the next morning. Additional, in her chapter, Bender also explains how many more resources an instructor has at his or her disposal when communicating asynchronously from home or the office. She states,

> "If a student asks a question that really stumps me, rather than resorting to the 'Good question. Anyone have an answer for this?' or 'Great. Let's spend the week researching this, and discuss it next time' comments that I might need to resort to on campus, I can merely swivel from my computer to my bookshelf, look up the answer, and produce an intelligent and informative reply." (386)

The same can remain true in Web conferencing environments. Not only do instructors and students have their entire personal library nearby, but they also have the wealth of knowledge contained on the Internet at their disposal. Additionally, if an instructor finds a Web site online that is particularly useful for a student, he or she can send the student the link immediately or the instructor could share his or her Web browser with the student (through remote access) and the student could follow along and look at the Web site at the same time as the instructor. Regardless of the use, not being constrained by physical proximity to the student or, more importantly, to a particular location, can be particularly beneficial for both students and instructors.

In addition to the spatial questions, there have been numerous questions about the anxiety levels of students when engaged in online teaching settings and also the type of students who learn the best in online experiences. Bender explains that anxiety is increased when students do not know what to expect and as a result, these students perform better when they are placed in a "highly structured environment" (13). In order to counteract these heightened levels of anxiety, Bender suggests that instructors "be encouraging, supportive,

and prompt at supplying guidance" (13). Rena M. Palloff and Keith Pratt (2005) echo

similar suggestions in *Collaborating Online: Learning Together in Community*. Palloff and

Pratt argue that in order for any online activity to be successful that "attention needs to be

paid to the four phases of activity: set the stage, model the process, guide the process, and

evaluate the process" (29). By following the above four phases, instructors will ensure that

students are fully prepared and supported as they work through online collaboration. These

four stages are also particularly important for Web conferencing. Students may have been

exposed to Web cams or microphones in their personal lives, but that does not mean that they

are automatically experts at using the technology for academic pursuits. Perhaps the most

important of these four stages is the final stage where both instructors and students evaluate

the process. It is important for instructors to elicit feedback from their students as they

explore Web conferencing because students may have ample and candid suggestions that can

improve the conferencing experience and decrease levels of student-induced anxiety. As will

be seen with one of the participants in the present study (Mandy), anxiety levels are

particularly important to address when introducing Web conferencing to a new class. As

Bender asserts, by being encouraging and supportive, instructors can help improve student

self-confidence as they prepare themselves or begin to participate in a Web conference.

Additionally, by helping students understand what to expect, students will be able to better

control their heightened anxiety levels.

Correspondingly, Bender also discusses what student personality traits best interact

with one another, both in class and through computer technologies. Bender cites a 1978

study where W.J. McKeachie explains what environments are the most beneficial for

introverted and extroverted students. According to Bender, McKeachie "found that

extroverts learn better when studying with another extrovert than when studying alone, and when performing original research. Introverts, in contrast do better when directly fed information" (15). These comments correlate directly to one of the implications discussed in Chapter 4 of this thesis, regarding the possibility of future student-student Web conferences. In other words, if an instructor asks his or her students to participate in Web conferences with other students, it is important that the instructor consider assigning partners to help ensure that two introverted students do not end up participating in the Web conference with high levels of anxiety with no one to lead or direct the Web conference.

1.5.2 Instructor Preparation and Support

Web conferencing parallels many other types of distance learning technologies, such as chats and message boards, but it does not necessarily harbor the same limitations of those types of technologies. For example, in preparing for this chapter and researching previous scholarly publications, I found that a large majority of these publications focus on how to avoid miscommunication or issues with students talking over one another via chat rooms. Suggestions were made for instructors to institute rules and guidelines for their students, such as typing the word "DONE" at the end of an IM exchange to ensure that the other participants knew when the first speaker was finished (Hewett and Ehmann 125). Interestingly, however, many of these limitations are not serious issues when students and instructors are engaging in Web conferences because of the oral nature of the medium. On the other hand, many of the suggestions for instructors provided by the scholars writing about these text-based technologies are transferable to someone who is considering using Web conferencing in the classroom. For example, Bender explains that one of the most important things that an instructor can do in a text-based environment is to "design high-level

questions" that force students to think about their answers before immediately responding (69). For Bender's purposes, these types of questions are particularly important because students need to respond with more than yes/no answers, which would destroy an online text-based conversation. However, the same principle can also be applied to Web conferencing between instructors and students. When an instructor is preparing for a Web conference, he or she should consider the types of questions that he or she asks at the beginning of the Web conference. If the questions are too open-ended, nervous students may not have any idea how to respond in a way that is preferable to the instructor. On the other hand, if the instructor asks too many questions that can be simply answered with yes or no, then the instructor will find that he or she is constantly driving the conversation and speaking most of the time, which defeats the purpose of a student-teacher conference.

Additionally, it is also important for an instructor to think about he or she will approach conversations during the Web conference. Typically, Web communication tends to be rather informal and most effective when delivered in short bursts. Bender mentions that through her research she found that "many students viewed their instructor in a more informal light online, which helped them to better challenge ideas and enable them to engage in a lengthier debate with their instructor than might be feasible on campus" (164). In other words, the students who Bender observed felt that the medium helped "bring down" the instructor to a position where the students felt freer to engage in longer conversations. If these feelings are transferable to the technologies employed in Web conferencing, then there may be much greater implications for students who struggle to speak directly to their instructors or who are often too timid to ask instructors questions after class. Therefore, instructors who are considering using Web conferences might reconsider the formality that

they bring to the Web conference, in order to make all students feel comfortable and willing to collaborate. On the other hand, however, instructors must perform routine self-reflections about the Web conferencing experience because "an instructor who is less comfortable with empowering students to take control of their learning process is less likely to experience success in collaborative work" (Palloff and Pratt 30). These instructors will need to evaluate Web conferencing to determine if it fits their teaching style and how they want their students to learn. Additionally, synchronous online instruction can be somewhat daunting for some instructors because they must provide immediate responses to student questions and if they are writing on a Whiteboard, then students are able to see their errors as they type. In *Preparing Educators for Online Writing Instruction: Principles and Processes*, Beth L. Hewett and Christa Ehmann (2004) agree that these feelings can be disconcerting for some instructors. They suggest, however, that these errors can provide students with valuable writing experience because the students are able to see an experienced writer make errors as they compose, which they usually assume does not typically happen with seasoned writers (*Preparing Educators* 121-22). The most important thing for instructors to keep in mind as they evaluate Web conferencing and consider its benefits and challenges is to add a little bit at a time to their classroom as they began to feel more comfortable. Hewett and Ehmann urge instructors to receive training as online communicators, in both synchronous and asynchronous formats, through intensive training courses, workshops, seminars, and other forms of professional development, in order to feel adequately prepared to teach with these new technologies (*Preparing Educators* 26-7). Once adequately prepared with formal training, instructors will be better armed to assess technological and pedagogical problems during the Web conference. Correspondingly, in her 2006 article "Synchronous Online

Conference-Based Instruction: A Study of Whiteboard Interactions and Student Writing," Hewett also suggests that instructors should simulate "with other instructors the talk, skills, and activities that facilitate the interaction's progress, paying particular attention to time and space" (25). Additionally, Hewett explains, that it is also important for instructors to examine "the potential time and space limitations as well as how online pedagogical strategies differ from those conducted in face-to-face conferences" ("Synchronous …" 25). There are various pedagogical differences between in-person and online instruction and it is imperative for instructors to be well aware of some of these differences, in order to be better prepared for online instruction. Many of these differences have been previously discussed in this chapter, such as asking specific, high-level questions, but there are also many more that instructors can use to make the Web conference as effective as possible.

1.5.3 Helping Students Adjust to the Medium

Perhaps one of the most difficult things for instructors to gauge is how much previous knowledge students have with learning in an electronic environment and then how to provide sufficient support for students. In a recent essay "Students' Views on Technology and Writing: The Power of Personal History", Susan Kirtley (2005) explains that while she previously assumed that most of her students were "savvy computers users," in reality, some of her students "lacked computer experience and access" and she has discovered that she "cannot take computer literacy for granted" (210). Additionally, even though all students at N.C. State have computer access (through computer labs at the library or in their residence halls), it is important to realize that there are varying levels of computer literacy and students who may be proficient at e-mail and IM may not be savvy word processor users or Internet researchers. As a result, then, it is imperative that instructors provide adequate exposure to

Web conferencing before expecting students to immediately understand how to use it effectively. Most importantly, Kirtley asserts, it is necessary to listen and work closely with your students and let them define the amount of support that they require (212). One such way that Kirtley recommends instructors become more knowledgeable about their students past computer use is to ask students to think about their previous experience with computers and then to outline how they feel about using different types of computer technology (222). Students could write brief narratives at the beginning of the semester about their experience with computing, which instructors could use to help assess the overall tech-savvy-ness of the classroom. Instructors can then frame class discussions about learning to use Web conferencing technologies with discussions of computer literacy and the importance of furthering literacy in an ever-changing technological world. These discussions would help students become better acquainted with the technology and would also allow them to think critically about the roles that computers play in today's writing processes.

Instructors must also remember that even through some students may have a lot of experience with general computing, they may not have a lot of experience with the specific software programs used during the Web conference. These students may be more apt at learning the new technologies, but they will still need some basic instruction on how to use the new technology. In her Whiteboard study, Hewett discusses a study that she performed with professional tutors and student writers who were engaged in online conferences (talking to each other through chat), who used Whiteboard throughout the conference as a way to collaborate with each other. Hewett suggests in her implications section that "many students made good use of their online conferences, but they might have benefited more had the class discussed the characteristics and challenges of such conferences, as well as student senses of

success and failure, openly" ("Synchronous …" 25). Hewett explains that this type of discussion would help students openly assert their needs as they learn how to successfully engage with a new online conferencing experience. Finally, Hewett also explains that students will further benefit from the online whiteboard conference if "clear goals and expectations for synchronous conferences can be set, explained and regularly practiced; ideally, students can become fluid not only with the technology, but also with the interactive conventions for the type/s of conference they will experience" ("Synchronous …" 25). This statement can certainly be extrapolated to Web conferencing. Hewett provides excellent suggestions for instructors interested in online pedagogy and her discussion of the use of whiteboard is directly related to some of the components used in a Web conference.

In conclusion, since Web conferencing is a new academic pursuit, there is very little (if any) written about how to integrate it into the classroom successfully. As a result, I have studied techniques from other composition researchers, who have worked to introduce new technology into their classrooms. By adapting some of these researcher's techniques and strategies, I have developed a qualitative methodology that studies Web conferencing in the first-year writing classroom. This study, therefore, will help to fill a gap in the types of technology used in the writing classroom. Most of the research to date has focused of the textual components of online communication, but this study on Web conferencing opens the doors to various types of multimedia experiences in the hope that students can receive a more complete and balanced online learning experience.

Chapter 2

Methodology

The following chapter describes the methodology used in this study. A statement of purpose is provided as well as a complete description of the sample population. Finally, I discuss the procedures that were conducted during each Web conference and explain how my data will be reported and analyzed.

2.1 Purpose

This study was devised and performed using qualitative methodology, in the form of an illustrative case study, in order to determine if it can be possible to successfully replicate a face-to-face student-teacher conference online through the use of current Web conferencing technologies. As the procedures for this study were finalized and as I was conducting the Web conferences and post-conference interviews, I sought answers to the following questions: What benefits and challenges do students find with online Web conferencing and how do these benefits and challenges affect the cyber replication of a face-to-face conference? In order to successfully answer these questions, I selected three students from my English 101 class at N.C. State to conduct Web conferences with me about their work on one of their major writing projects. (The specific selection process is detailed below.) I contacted these students via e-mail explaining the purpose of my study (See Appendix A.), attached a copy of the Informed Consent Form for Research that had been approved by N.C. State Institutional Review Board (See Appendix B.), and waited for the students to determine if they were willing to participate.

After these 15-30 minute Web conferences were conducted, the students remained in my office for another 15 minutes to conduct "in depth interviews" about their experiences with the Web Conference, with the goal "to elicit rich, detailed material that can be used in analysis" (Lofland and Lofland qtd. in Mahoney). Both the Web conferences and the interviews were recorded to be used for further analysis. This multi-modal research method approach allows me to study both the benefits and challenges for the three student writers to participating in the Web conference as well as how these benefits and challenges affected the effectiveness of each Web conference.

2.2 Sample Population

With each Web conference and interview conducted, there were two participants—the student selected to discuss his or her assignment and me (the student's instructor). The three student participants were all selected because they demonstrated a commitment to their writing early into the spring 2006 semester and seemed eager to engage in the revision process. Their early commitment to the course made me interested in exploring how they might react to a non-traditional conferencing experience. Although the population sample is rather small, I aimed for what Michael Patton calls "stratified purposeful sampling" in order to gather three students who were representational of the typical first-year writing experience at N.C. State (174). As an instructor, I knew the last English class that each student had taken from a brief in-class writing assignment and I knew how they participated in class discussion and engaged in class activities during the first three weeks of the spring 2006 semester. Other than if they had been successful in their last English class, I had no previous knowledge of their past grades in English or the types of writing that they had previously done, until I conducted this study.

The English 101 class that these study participants are in enrolled in is formally titled English 101: Research and Writing in the Disciplines. The class is taught with somewhat-strict, department-mandated structure where students are exposed to different writing in various academic disciplines. My English 101 class, much like most others taught at N.C. State, focuses on writings in the sciences, social sciences, and humanities, with the final writing project being a research-based project in a discipline chosen by the student. The purpose of this course is to expose students to the different types of academic writing that they will encounter in their college careers and to help students become rhetorically aware to the point where they can work better within these disciplines, while also being able to notice the similarities amongst all types of academic writing. In addition to discussing different types of academic writing, the First-Year Writing Program at N.C. State also expects its students to become more aware of the possibilities of composing in a technological atmosphere, where computers are an ever-increasing standard. As a result, English 101 classes are taught in a computer-enhanced environment. The class is a four-hour course that meets on Mondays, Tuesdays, Thursdays, and Fridays. Two days out of the week the course meets in a traditional classroom and the other two days of the week the course meets in a computer lab reserved for first-year writing courses.

For this study, the student participants were at the revision stage of Project 1. This project asked the students to perform a rhetorical analysis on an instructor-selected scientific report, in order to study the general goals and purposes of one type of scientific writing. The students analyzed the report based on a model format laid out by our textbook authors Judy Kirscht and Mark Schlenz in *Engaging Inquiry: Research and Writing in the Disciplines*. Each student participant had already written his or her first draft for the project, had that draft

peer reviewed by at least two other students, and had turned in that first draft to me for instructor comments. After receiving my written feedback, the students continued to revise their drafts until the due date.

In addition to my written feedback, these three students were also receiving my oral feedback through the Web conference. However, this did not put the other 18 students in the class at a disadvantage because I was also available for face-to-face conferencing for all students. One of the requirements in my English 101 class is that all students set up an out-of-class appointment with me at some time during the semester to discuss their progress on a major writing project. For the three students in this study, their Web conference simply replaced the face-to-face, out-of-class conference that they normally would have conducted with me.

2.2.1 Student 1—Shannon[1]

Shannon is an 18-year-old, African-American woman, originally from Houston, TX. She lives off-campus and commutes to school from a nearby city. She is a Middle Grades—Social Studies and Language Arts—Education major. When I first contacted the participants by e-mail, Shannon was very enthusiastic about participating and set up a meeting time mere hours after my initial contact. When she arrived at the conference, she had already signed her consent form and needed only basic instruction in the technological aspects of the Web conference. She was very familiar with IM, using it daily, but had never used a Web cam or computer microphone. She had seen remote assistance and application sharing used by other computer users, but had never participated in a similar interaction. With respect to composing and revising her writing projects, Shannon explained that she usually handwrites

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[1] As agreed in the Informed Consent Form for Research, all participant names, other than my own, are first-name pseudonyms.

her first draft by pen or pencil and then puts the composition into the computer. From that point, she revises only on the computer screen because she finds it easier to use cut and paste and use other word processing features (Appendix D).

Although a typical English 101 student by age and appearance, Shannon did bring an interesting English background to the Web conference. For the majority of first-year students at N.C. State, English 101 is the first English class taken at the university, as it typically serves as a pre-requisite for all other English classes. As discovered in her interview, Shannon had previously taken English 263, English Literature II, at N.C. State. She says in her interview:

> It was an accident…[*Laughing.*]…I came in [to the university] and it [English 263] didn't have any pre-reqs and I couldn't get into [English] 101 because you know everybody's trying to get into 101, so I went ahead and took it [English 263] and it was just like the grace of God that I got a C. (Appendix D)

This places Shannon in an interesting context with respect to English 101. She has already successfully—albeit, barely—taken a class where it was assumed that she had already developed the skills that she is just now developing in English 101. Whereas she was at a disadvantage in her English 263 class last semester, she is now at an advantage in our English 101 class because she has already begun writing college-level papers for an English instructor. As a result, as mentioned in our interview, Shannon has engaged in other out-of-class writing conferences with an English instructor at the college level. This experience adds an interesting perspective to this study as she has significant student-teacher conferencing experience that she can use to compare to our Web conference. Whereas other students are comparing their conference experience with conferences (sometimes about

writing) for other college-level or high school classes, Shannon can directly compare a face-to-face English conference with the writing Web conference.

2.2.2 Student 2—Mandy

Mandy is a 19-year-old, Caucasian woman, originally from a small town in central North Carolina. She lives on-campus and is an Agricultural Business Management major. When I first contacted all of the subjects about possibly participating in the conference, I did not hear from Mandy immediately. In fact, it was not until two days later when I e-mailed Mandy a follow-up note that I heard anything from her about participating in the Web conference. When she responded by e-mail she said: "Laura, I do not mind being involved with the [W]eb conference, I am just scared that I will not know what to say. But I will be glad and try to help" (E-mail 01 February 2006)[2]. When I wrote back to Mandy and explained to her the procedure of the Web conference, told her that all responses to the Web conference would be useful, and reassured her that the study was not analyzing her performance in the conference, she e-mailed me back and told me that she was looking forward to our meeting.

During our post-conference interview, Mandy characterized herself as "very computer illiterate" and explained that she had never used Web cams or computer microphones before the Web conference (Appendix E). Mandy did, however, say that she used IM and e-mail daily. While she does use IM daily, she did not know the exact name of her IM client: "I've used IM, yes…well, not really sure which one…I've got a Buddy List[3]. [*Laughing.*]" (Appendix E). This indicates that while she does use IM daily, she does not

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[2] Quotation used with permission from a February 8, 2006 e-mail.
[3] A "Buddy List" is AIM's counterpart to MSN's "Contact List." Either is just a list of users available online at a given time.

necessarily understand all aspects about its use. She did not mention having any experience with remote assistance or application sharing. When she is composing and revising, Mandy explained that she usually types her first draft onto the computer, prints it out for revising, and then makes the final changes online. She explained that she tends to get distracted (by e-mail or Web browsing) if she attempts to revise straight onto the computer, so she prefers to find a quiet place to make her revisions by hand and then make the changes online once she is finished (Appendix E).

With respect to other conferences with instructors, Mandy explained that she had very little experience with such meetings. She cited that most of the interaction she had with college instructors simply involved just having quick questions and running by the office during office hours to ask her questions (Appendix E). When questioned about conferencing with English teachers at the high school level, she indicated that the majority of her meetings with teachers had been contained to personalized, in-class discussions where teachers walked around and were asked questions by their students. Additionally, when we were talking about former student-teacher conferences that she had participated in, Mandy also cited one particularly traumatic experience from her high school Advanced Placement English III class:

Mandy.	I had one teacher who would read out loud your paper to the class and he would just like kill it…kill your work.
Interviewer.	Really? So he would read it out loud and then…?
Mandy.	He would read a good one, one that he thought was good…he was just really different.
Interviewer.	Wow…so that was sort of…I'm sure that was really….
Mandy.	And, I mean, we were saying, "God, don't let him read my paper!" [*Laughing*.]…cause he would just kill it…I mean we had AP English III…and towards the end he started making his comments nicer….

Interviewer.   Geez…OK, …

Mandy.   Yeah and you'd want to make sure you always wrote the right thing, so he wouldn't slam your paper! [*Laughing.*] (Appendix E)

This experience creates an interesting perspective for Mandy as she thinks about her interactions with other writing teachers. Undoubtedly, her experience in this class has affected how she views the authority of a writing teacher and has implications for how she assesses how she can interact with her other instructors in a one-on-one setting.

2.2.3   Student 3—Wes

Wes is a 19-year-old, Caucasian man, originally from a small town in eastern North Carolina. He lives on-campus and is an architecture major. When I first contacted the student participants for this study, I did not here from Wes immediately. After a quick reminder e-mail a few days later, I still had not heard from him. When I was able to talk to him one morning before our English class began, Wes told me that he remembered receiving my initial e-mail and had completely forgotten to write me back. When I asked him if he was interested in participating, he told me that he was and that it sounded interesting, but that he had a very busy schedule and he hoped that we could find a mutually agreeable time to meet. Once we found a time that worked well for both of us, he told me that he thought it sounded like an interesting project and that he was happy that he was able to be a part of it.

During the interview after our conference, Wes explained that he had used computer microphones before, but never Web cams. Like the other two student participants, he uses IM and e-mail daily. He also mentioned that he was unfamiliar with using remote assistance (Appendix F). During the composition and revision process, Wes explained that he revises directly on the computer screen because it "seems easier" (Appendix F). Also, during the

interview, he explained how an interesting middle school class had helped him get to the

point where he felt the most comfortable revising directly onto the computer:

Wes.	There was like a big push for that [revising on the computer] when I was in middle school…we had, like, a class on copying and pasting.
Interviewer.	Oh, really?
Wes.	Yeah, there was like a huge push just for like the revisionary aspects of using the computer of like copy and paste and insert and doing this and that.
Interviewer.	And that was in middle school?
Wes.	Yup
Interviewer.	What years were you in middle school?
Wes.	Oh man…let's see…[*Thinking.*] I'm a freshman here [in 2006] so…four years ago I was still in high school…which was 2001…so I guess like 1999, I guess. (Appendix F)

Regardless of the fact that his impromptu math was wrong and four years ago was in 2002,

Wes would have been in middle school in the late 1990s and early 2000s. This experience

indubitably gave Wes an interesting perspective on how to revise and obviously these

tendencies remained with him throughout high school and into his college courses.

When asked about other conferences that he had conducted with instructors, Wes

explained that he had only met with college instructors once or twice while at N.C. State.

Neither of those meetings were with English instructors, instead one meeting was with a

sociology instructor and the other was with a history instructor. Wes explained that during

the conference with the history instructor they had discussed a major writing project that he

had been asked to complete on American history. Much like Shannon, Wes also brings to the

study a perspective where he has had conferences about writing with a college-level

instructor. Whereas Shannon's experience revolved around discussing her writing with an

English instructor, Wes's experience brings to the study a writing conference with a non-

writing instructor who "was really big on writing about history and [who] had a lot of really

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good guidelines about how to do that" (Appendix F). The fact that Wes's history instructor concentrated a lot of his time on teaching his students how to write about history indicates that Wes's "writing" conference for this class probably gave him some good ideas about how a writing conference with a faculty member in the English Department might be conducted.

2.2.4 Instructor—Laura

I[4] am a 23-year-old, Caucasian woman, originally from Hickory, N.C., which is a medium-sized city in the foothills of the Appalachian Mountains. Graduating from N.C. State with a BA in English in 2004, I am currently a second-year Master's student of English. In addition to her Master's coursework, I am an instructor-of-record for English 101. I apprenticed under a mentor in the spring of 2005, where I attended all-classroom-meetings of an English 101 class, met occasionally with students during office hours, and graded a few of the major writing projects during the latter half of the semester. During the semester that this study was conducted, I was in her second semester of teaching English 101 as an instructor-of-record. Each semester, I taught approximately 20 students in a computer-enhanced environment. In addition to conferencing with all of her students each semester at least once (often times more than once), I also bring experience from conferencing with my own instructors about my writing assignments. Additionally, as an informed, natural participant, I bring an interesting perspective to the conferencing experience because it was only six years ago that I was a first-year writer taking a freshman composition course at N.C. State.

2.3 Procedures

As previously mentioned, I selected students for this study from my spring 2006 English 101 class. The three student participants previously mentioned were selected based

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[4] Because I am both instructor and investigator in this study, some brief background information is helpful.

on their initial performances in English 101 during the first three weeks of the semester. All three students appeared to be dedicated to the writing and revision process and seemed genuinely interested in improving their writing projects. It is also important to note that in addition to the three students who actually participated in the study, I also initially contacted a fourth student who was very interested in participating in the study, but who was too busy with other school activities to complete the Web conference with me during a time that would be academically beneficial for him during the revision process.

Once my three student participants agreed to participate in the Web conference, we set up a mutual time to meet at my cubicle in Tompkins Hall on the campus of N.C. State. Prior to beginning the conference, I secured a second location for me to set up my laptop during the Web conference. For all three conferences, I was situated approximately three to five cubicles away (about 25 feet) from the student participant, who used my office computer for his/her computer terminal. Before the student arrived I set up both computers so that they would be completely ready to run at the onset of the Web conference. Under normal circumstances where a student and teacher are conducting a Web conference on their own time from home, each user would have to properly load all of the software and hardware. However, out of respect for my students' busy schedules and to ensure that no student participant felt like he or she was at a major disadvantage due to his or her level of present computing skills, I felt it was necessary to go ahead and load all of the programs and ensure that they were working correctly before the student participant arrived. If an instructor wished to conduct Web conferences with students from their home, where the instructor would be unable to help troubleshoot technical difficulties before the Web conference began, an instructor could easily create and hand out a detailed instruction sheet that explained the

proper order to download and start the software. As an aside, it is important to mention that since the students were asked to come to my office for the Web conferences, the actual physical location of both the student and the equipment may have had an effect on the social dynamic of the interaction between student and instructor.

Before the day of the first Web conference, I loaded a series of hardware and software on to both my personal laptop computer and the desktop computer located in my office. On each computer, I first installed a Logitech's QuickCam IM Web cam, microphone, and associated software. This particular Web cam cost approximately $50 from a popular online store and also included a separate earpiece with a built in microphone. During a video conference, the earpiece and microphone can either both be connected to the computer or just one or the other. For example, it would be possible to use a separate microphone and the Logitech earpiece, if preferred, or a user could use the Logitech microphone and the computer's speakers. For privacy purposes during the Web conference, I used both the Logitech microphone and earpiece. All-in-all, two different Web cams and microphones are needed for simultaneous video conferencing. After installing the Web cams and microphones and ensuring that they were functional devices, I installed fully functional, free, trial-versions of Camtasia Studio 3 on each computer. This screen-recording software fully integrates with all of the hardware and software used in this study, including the Web cam and microphone. As a result, it is necessary to install the Web cam and microphone prior to installing Camtasia Studio 3 to ensure that Camtasia Studio will be able to recognize the Web cam and microphone during the recording process. The video recordings created by Camtasia Studio during the recording process are called .camrec files and are played through a special Camtasia video player that is designed to recognize these files. In order to play

these files in other media players, the files have to be recoded into different video formats. After this step, I downloaded MSN Messenger Version 7.5, which is free to all users. I also registered two distinct e-mail addresses with MSN and associated two names with these e-mail addresses. One name was "Laura," which was used by me during the Web conference and the other was "ENG 101 Student," which was used be all three student participants. During a normal Web conference operated from home, each instructor and student would need to have their own e-mail address registered with MSN. Instructors and students could choose to register their personal e-mail addresses that they use for personal IMs or they could register different e-mail addresses and aliases (such as a free e-mail address available through Hotmail or another free, Web-based e-mail client) in order to keep their personal IM correspondence separate from their academic IM correspondence.

Before each conference began, I opened up Microsoft Word 2003 and opened each student's first draft of Project 1. Once each computer had an instance of the electronic file, I saved the paper to that computer's hard drive with two different names (such as StudentPaper1.doc or InstructorPaper1.doc). I used different names in case any changes were made to the documents during the Web conference. In such a case, I wanted to be sure to preserve the changes without overwriting the original paper. I received electronic copies of each paper from the student when all of the students in the class submitted their first drafts of Project 1 to me online via a university-wide program called submit.ncsu.edu, which allows students to submit electronic files to their instructors without having to use e-mail attachments.

Additionally, I ensured that each computer was connected to the Internet through a high-speed Internet connection. My office computer, which is a desktop, approximately two-

to-three years old, was connected to the Internet through N.C. State's local area network

(LAN) through a standard CAT-5 cable (often referred to as an Ethernet cable). My personal

computer, which is a laptop, approximately one-and-a-half years old, was connected to the

Internet through 802.11g wireless card and a wireless access point, entitled "NC State", that

is available to all university users, within range, who can confirm their identity with their

N.C. State user id and password. Once connected to the Internet, I started Camtasia Studio,

waiting until right before the Web conference began to actually start recording. It was

important to wait until the last minute to hit record because many of the Camtasia video files

(suffixed .camrec) that were created during the recordings were nearly 1 gigabyte (GB) in

size, which corresponds to approximately 25 minutes of recording time.

After these programs were loaded, I started up MSN and logged on to the student's

computer in my office as "ENG 101 Student" and to my personal laptop computer as

"Laura." With the Web cams and microphones previously installed, MSN recognized that

both computers were able to have video conferences. As a result, from either computer, I

could request to start a video conference with the other user name. After a few seconds, once

both computers confirmed that they were willing to engage in a Web conference (The

computer's confirmed by the user simply clicking a link in the IM screen that said "Accept a

video connection with [user's name]"), each IM screen displayed a large picture of what was

displaying on the other user's Web cam, as well as a smaller picture on the bottom of the IM

screen that displayed what the local computer's Web cam was displaying. In addition to

displaying the video images, the microphone was automatically turned on and each earpiece

could hear what was being echoed in the opposite computer's microphone. Once this video

conference was set up, either computer could start Whiteboard, Remote Assistance, and

Application Sharing by clicking on buttons available on the video conferencing screen. I started each program (confirming the request from the second computer) and let each program begin before the student participant arrived.

At this stage, I used Application Sharing to share Microsoft Word and the student's first draft of Project 1 with the other user. I could have shared both copies of the student's paper (the one on the instructor's computer and the one on the student's computer), but I felt for simplicity's sake that it was necessary only to share the copy on the student's computer, which allowed the instructor to take control of the MS Word file on the student's computer during the conference.

Once the student participant arrived at my office for the Web conference, I went over the Consent Form for Research and had the student sign the form, if he or she had not done so already. I then made a copy of the form for the student to keep for his or her personal records. I explained that the student would be working on my machine in my office, while I would be a few cubicles down in another office on my laptop. I provided the student with a quick demonstration of the software that could be used during the Web conference, opening all of the different software windows for the student showing the student the functionality of each feature. Additionally, I showed the student where his or her paper was located. I also showed the student the open IM conversation, which was displaying a video stream of the images captured by my laptop's Web cam and the Remote Assistance and Whiteboard windows. I asked the student if he or she had any questions and once any questions were answered, I told the student to get comfortable and to get out anything he or she would need for a traditional face-to-face conference. Explaining the recording process and my needs for recording the conference, I then hit record on Camtasia Studio on the student's machine,

waiting until after the screen re-displayed after its short blackout period and explained that the student may see something similar when I hit record on my laptop.

Once the student was comfortable, I left the student to go to the other office, carrying with me my teaching files (an assignment sheet and any notes I had made about the paper, which I had previously read before the student arrived). When I arrived at my computer, I checked my sound and voice levels and ensured that the student could hear and see me and then hit record on my computer. Once my screen was recording, I proceeded to ask the student what questions he or she had about successfully completing the project and then the student and I discussed different aspects of the student's paper, taking questions throughout the conference. After there were no more questions or discussion to be had about the paper (approximately 15-25 minutes later), I told the student that we were finished with the conference and that I would return to my office shortly.

In order to help visually demonstrate what a Web conference looks like for its participants, I have included the following four figures. Figures 2.1 and 2.2, below, show pictures taken with a digital camera of each workstation. Figure 2.1 shows the desktop computer in my office that all student participants used during the Web conference. In particular, note the Web cam sitting atop the monitor and the earpiece and microphone sitting on the desk. Figure 2.2 shows the laptop computer that I used as the instructor during my three Web conferences. With the laptop configuration, the Web cam still sits atop the screen; however, in this situation, it is clipped to the top of the computer with a built-in clip that came with the Web cam and earpiece/microphone
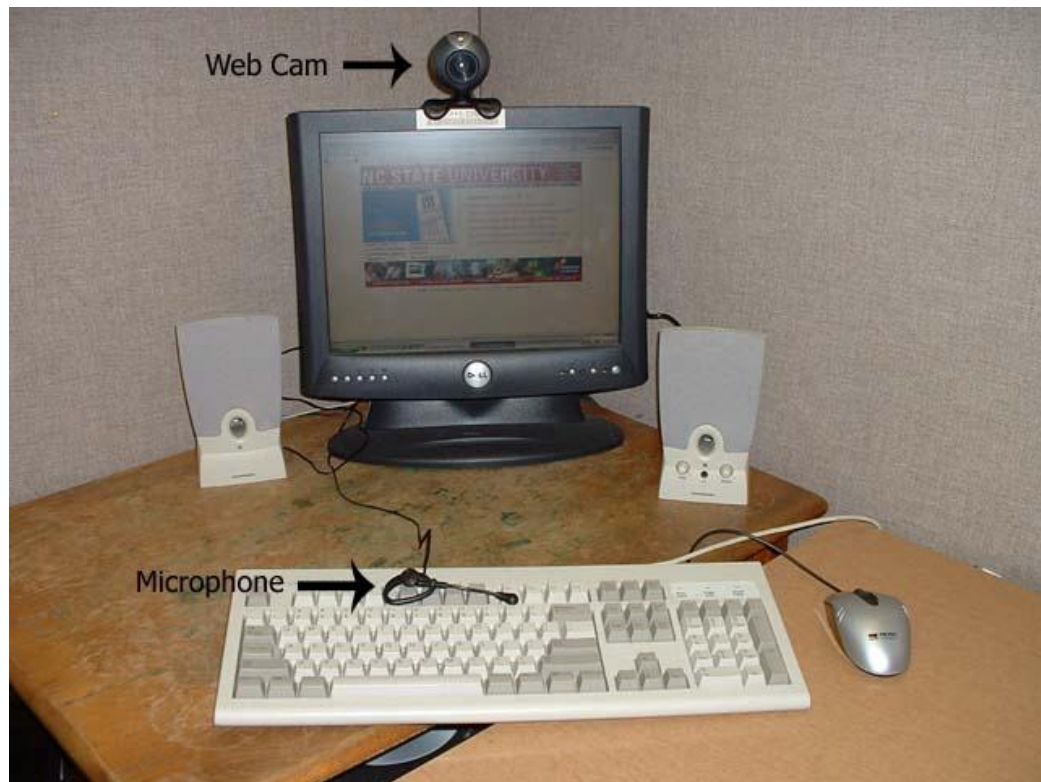
Figure 2.1 "Digital Camera Photograph of the Student's Desktop Configuration"

Figure 2.2 "Digital Camera Photograph of the Instructor's Desktop Configuration"

Figures 2.3 and 2.4, below, show a visual example of what a Web conference looks like on each participant's screen. Figure 2.3 contains a screenshot from the student's computer. In this figure, the student, Shannon, is displayed in the smaller picture on the IM screen and the instructor, Laura, is in the larger picture. To the right of the IM video conversation is the MS Word document that contains Shannon's first draft of Project 1. Figure 2.4 also shows a screenshot from Shannon's Web conference; however, this screenshot comes from the instructor's computer. The picture displays the instructor, Laura, in the smaller picture at the bottom of the IM box and the student, Shannon, in the larger picture. Again, on the right side of the screen is a copy of Shannon's first draft of Project 1.
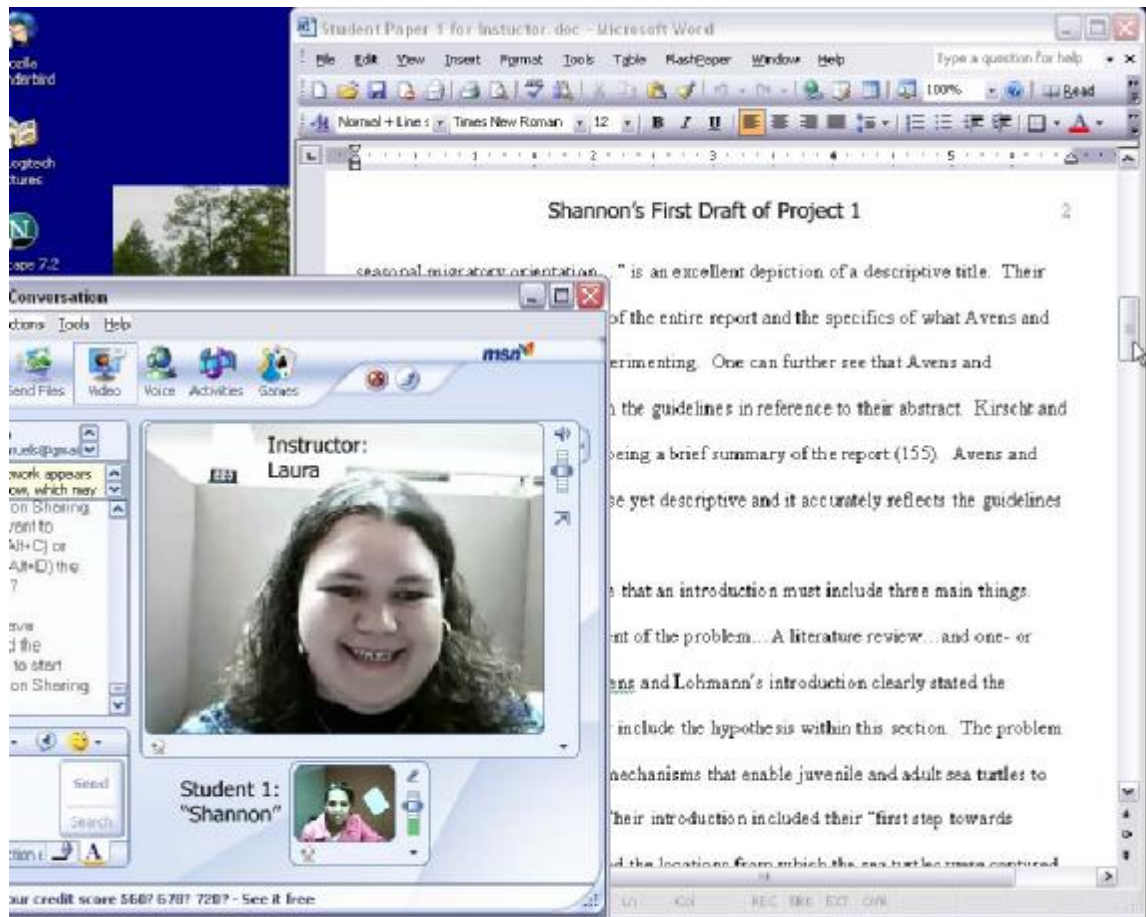
Figure 2.3 "Screenshot of a Web Conference from the Student's Computer"
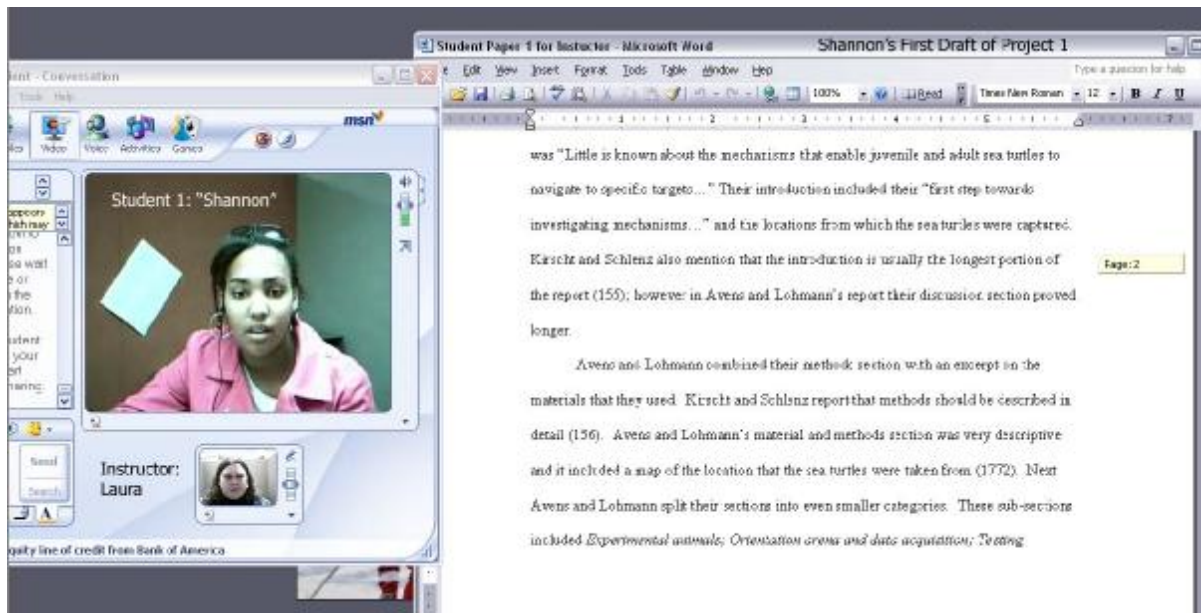
Figure 2.4 "Screenshot of a Web Conference from the Instructor's Computer"

During a trial run of the set-up and recording process, a few days before my first

conference, I realized that Camtasia did not have the capability to record the sound being

outputted from the computer at the same time that it was recording the microphone sound, or

the sound being imputed into the computer. In other words, the student's .camrec file

contains only the sound that the student spoke into the microphone during the Web

conference, whereas the instructor's .camrec file contains only the sound that the instructor

spoke into the microphone during the Web conference. In order to reconcile this problem,

the two .camrec files were converted to .avi[5] files (with the help of Camtasia Studio's .avi

converter utility), so that the .avi files could be run through the QuickTime Pro media player.

QuickTime Pro allows two video files to run simultaneously on the same computer screen.

This simultaneous interaction is necessary in order to show the screen recordings of the Web

conference as a two-way conversation, as opposed to a one-sided video where only one

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[5] An .avi file is simply a different type of video file that is compatible with more computer video players than
the .camrec files, which are compatible only with Camtasia Studio.

participant's sound is recorded. While this process solved the problem of the one-sided conversation, it did present an alternate problem. Because each screen recording recorded everything on the screen at that screen's set resolution (i.e. full-screen size), the recordings are best viewed at that same resolution. However, in order to show both movies simultaneously on the same screen, it is necessary to decrease the resolution size of each movie. As a result, as shown in Figure 2.5, when both movies are run simultaneously, it can be difficult to read the text in the student's paper file as well as other small objects displayed on the screen.
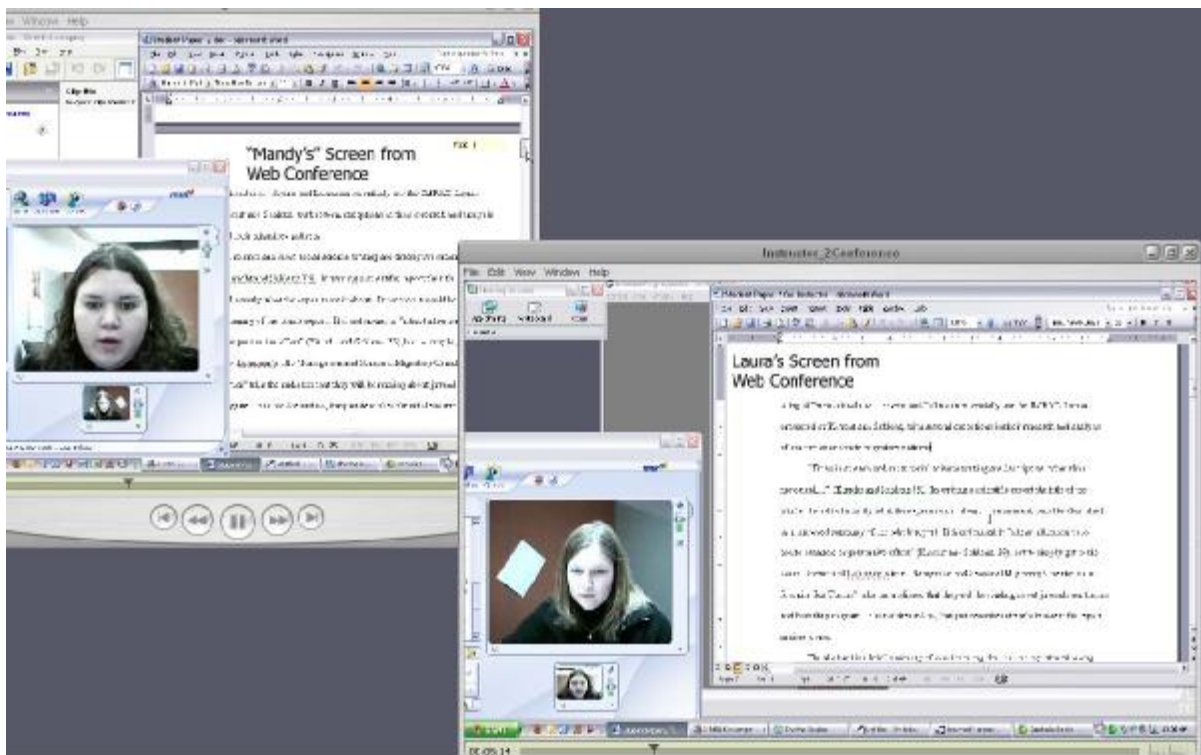
Figure 2.5 "Screenshot of Web Conference 2 Running Simultaneously in QuickTime Pro"

Note, in particular, the difference in text clarity between Shannon's paper in Figures 2.3 and 2.4 and Mandy's paper in Figure 2.5. Therefore, when analyzing these conferences, I watched the movies run simultaneously, pausing when I needed to read something specific in the Microsoft Word document. At that point, I viewed that one Web conference movie in

full-screen mode, in order to see what was necessary. Once again, it is important to mention that I only used the screen-recording software for research analysis purposes, so this would not be a typical problem for instructors who simply wanted to engage in a Web conference with students without recording the conference proceedings

Once the Web conference was completed, I stopped the recording on my screen, ensuring that the .camrec file would be saved and returned to my office. Once in my office, I changed seats with the student and stopped the recording on the student's computer, again ensuring that the .camrec file would be saved. After the conference was complete, I told the student I had a few questions to ask him or her about his or her experience with the Web conference. I informed the student that I would be recording this interview with the help of a small, digital-voice-recorder, for research purposes. Once the recorder was started, I began going through my list of previously written interview questions (See Appendix C.). I used an in-depth interviewing technique, where I based my interviews on the same set of 17 questions, but I prodded for more detailed answers where necessary and asked follow-up questions based on the answers received from the student. Once the interview was complete (after about 15 minutes), I gave the student the opportunity to comment on any aspect of the conference that he or she hadn't yet mentioned and then thanked the student for his or her help.

Once the student left my office, I checked both of the .camrec files, as well as the interview recording, to ensure that all recordings were successfully saved. At this time, I also made back-up copies of each .camrec file that were saved to multiple personal computers to ensure their protection. Most of these .camrec files could not be backed up onto compact discs because they were larger than the 750 MB of space available on most blank CDs.

These .camrec files were then converted into .avi files and run simultaneously through QuickTime Pro. For the ease of analysis purposes, I then re-recorded these recordings with Camtasia Studio, so that I could save the entire Web conference in the same file and not have to worry about re-finding the correct starting point every time I had a question about the Web conference. Additionally, I transcribed all three post-conference interviews into MS Word documents for easier analysis. Transcripts of all three post-conference interviews are available at the end of this thesis in Appendices D, E, and F.

2.4 Data Reporting and Analysis

As will be discussed further in Chapter 3, the data analysis portion of this study was conducted by reviewing my interview transcripts and recordings from each Web conference. Since each post-conference interview was guided loosely on the pre-determined interview questions, but contained different follow-up questions based on the student's response, it was necessary to categorize each response. As I reviewed each question and response, I placed it in a chart into one of eight criteria that I would use later to determine the benefits and challenges of Web conferencing for this group of students. A sample chart is shown in Table 2.1.

Table 2.1 "Sample Table from Post-Conference Interview Responses"

Specific Criterion	
Shannon	• Sample Response 1 • Sample Response 2 • Sample Response 3
Mandy	• Sample Response 1 • Sample Response 2 • Sample Response 3
Wes	• Sample Response 1 • Sample Response 2 • Sample Response 3

After I recorded this interview data, I began to review the conference recordings. As I watched each recording, I made notes of what was occurring on both the student and instructor's screens. I also paid particular attention to the facial expressions and mannerisms that each participant made throughout the Web conference. By reviewing these notes and synthesizing them into the discussion provided in Chapters 3 and 4, I was able to revisit and answer the two research questions that I asked at the beginning of the this project: What benefits and challenges do students and teachers find with online Web conferencing and how do these benefits and challenges affect the cyber replication of a face-to-face conference?

Chapter 3

Results and Discussion

The results from this research study were determined after reviewing the interview transcripts from each of the post-conference interviews that were conducted with each student participant. In order to better synthesize all of the data gathered during this study, I have broken down the data reporting and analysis phase into two distinct sections—the post-conference interview transcripts and the recordings of each Web conference. The data reporting and analysis needed to be divided up in this manner in order to give full and complete discussion to each aspect of the Web conference in which the students participated. Once these two distinct sections have been reported and discussed separately, I will provide a summative analysis of all three interviews and Web conferences in Chapter 4 in order to fully synthesize all of the data.

3.1 Post-Conference Interview Results and Discussion

As previously mentioned, the first data that I began to report and analyze were the post-conference interviews. I decided to begin with the interviews because they gave me a tangible way to discuss and compare all three Web conferences at once. The post-conference interviews were conducted by an in-depth interviewing technique. In other words, all three interviews were loosely guided by the same 17 interview questions that where created in order to help answer my two research questions (See Appendix C.). Once the interview began, however, I allowed the interview to flow freely depending on the answers that each respondent gave. Because each interviewee received different follow-up questions based on his or her initial response, I am reporting the results in a way that allows the reader to see the

eight general criteria that naturally developed during all three interviews. These divisions are as follows:

1. Student's previous experience with and exposure to Web conferencing and communication technologies.
2. Student's previous experience with and exposure to face-to-face student-teacher conferencing at the high school and college level.
3. Student's initial impressions of the Web conference.
4. Student's view of the technology as an asset or a barrier to the Web conference.
5. Student's impression of the degree of success of the Web conference.
6. Student's preference for future conferences (includes both student-student and student-teacher conferencing).
7. Student's thoughts about recording future Web conferences for personal review.
8. Student's level of anxiety compared between a face-to-face and Web conference.

Once I determined these eight divisions, I constructed a chart that would allow me to compare each interviewee's reaction side-by-side to the other interviewee's responses for that criterion. (See Table 2.1 in Chapter 2.) In this chart, I summarized each respondent's response with key words and phrases that helped convey the general gist of the respondent's answers. Following the data reduction and data display matrix protocol practices advocated by Susan Berkowitz (1997), the results from this process are shown in the following eight tables. Each table lists the criterion at the top and then shows each respondent's response below. Following each table is an analysis of that table's criterion.

In general, while each respondent did not know what the other interviewees had discussed during their post-conference interviews, I found that many of the discussions regarding each of the eight criteria tended to come to similar conclusions with the exception of the successfulness of the Web conference and the preference for future Web conferences with other students and teachers. Although the students came from different hometowns and attended different high schools, it would be expected that students who were approximately the same age would have had similar experiences with Web communication technologies. In

fact, since this study occurred during the students' second semester at N.C. State, most of the

students would have been exposed and acclimated to many of these communication

technologies once they arrived at N.C. State and were integrated into the campus culture.

3.1.1 Criterion 1

<div align="center">Table 3.1 "Interview Responses to Criterion 1"</div>

Criterion 1: Student's Previous Experience with and Exposure to Web Conferencing and Communication Technologies	
Shannon	- Uses IM and E-mail daily - Never used a Web cam or microphone - Only seen others use remote assistance - Writes out first draft of papers by hand → Types the draft on the computer → Revises subsequent drafts online (using copy and paste)
Mandy	- Uses IM and E-mail daily (although did not know the name of her IM client) - Never used a Web cam or microphone - Considers herself to be computer illiterate - Prints out drafts from the computer → Makes revisions on hard copy in a quiet setting to maintain concentration→ Transcribes changes on the computer at a later time
Wes	- Uses IM and E-mail daily - Never used a Web cam - Had previously used a microphone on a couple of occasions - Composes and revises completely on the computer; Took a class in middle school (during the late 1990s) where he was taught to uses cut and paste and insert to help with the revision process

The first criterion that I reported for this study was entitled "Criterion 1: Student's

Previous Experience with and Exposure to Web Conferencing and Communication

Technologies." Under this criterion, I asked my students what previous exposure they had

toward the communication technologies that we used during the Web conference and how

they typically used computers during their revision process. Not surprisingly, all three

students who participated in this study used IM and e-mail on a regular basis to communicate

with friends, family, and instructors. Within this discussion, however, one interesting thing

to note is that even though Mandy used IM daily, she didn't actually know the specific IM

client that she used and only knew that she had a Buddy List[1] and she considers herself to be computer illiterate. None of the three students had previous experience using a Web cam for communication and only Wes had used a microphone that was hooked up to the computer. These facts show that while the students do use IM and e-mail daily, they have not given much thought to using other communication hardware in conjunction with IM and e-mail. Therefore, to these three students, Internet communication remains as solely a text-based experience as opposed to multi-textual experience that involves picture and sound. In addition, the three student subjects had not previously used remote assistance or access, with only Shannon having seen it previously demonstrated.

Finally, although the three students are approximately the same age, they all have their own techniques when using the computer during the composing and revision process. Shannon chooses to write out all of her first drafts by hand, to type that draft on the computer, and, finally, to revise all of her subsequent drafts on the computer screen. On the other hand, Mandy composes directly into the computer, prints her first draft and makes changes via pen in a place where she is free from distractions. Finally, Mandy will return to the computer to make her revisions on the computer screen. For Wes, composing and revision is done solely through the computer. In addition, during Wes's interview, he mentioned that when he was in middle school in the late 1990s that he and his peers took a class on how to use the computer during the revision process. In particular, Wes explained that they were taught how to use copy and paste, insert text, and other word processing features within their own papers, so that they could learn to make all changes via the computer. Wes's explanation of this class indicates that he and probably many other students

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[1] Titling a Contact List a Buddy List is exclusive to the AIM chat client.

around his age have be instructed how to use computers during the writing process and as a result many of these students will be much more adept at trying out new technologies as they are introduced to them by the university and writing instructors. Perhaps the most fascinating result to come out of Criterion 1 is that regardless of how much the student understands about the intricacies of the AIM, e-mail, or other communication technologies, he or she still uses them on a daily basis and they have become a fundamental communication medium for both personal and academic use.

3.1.2 Criterion 2

Table 3.2 "Interview Responses to Criterion 2"

Criterion 2: Student's Previous Experience with and Exposure to Face-to-Face Student-Teacher Conferencing at the High School and College Level	
Shannon	- Has had three conferences at the university level, including writing conferences for an English Literature course - Took a 200-level English Literature course before taking the 100-level Academic Writing course required of all NCSU undergraduates because she had trouble finding a seat in the 100-level course - Made a C in the English Literature course
Mandy	- Has had only a few face-to-face conferences at the university level - These conferences were usually limited to quick questions to help clarify instructions - At the high school level, her writing conferences were conducted primarily during class - One such high school writing class instructor created a traumatic conferencing environment with his class because he would read good and bad papers aloud to the class and publicly critique these papers - Mentioned that she was scared of this teacher and his tactics and tried to avoid his comments or only write exactly what he wanted to hear
Wes	- Didn't have writing conferences in high school - Has had student-teacher conferences with a sociology and history professor - The conference for his Modern American History class focused around a final term paper on writing about history where the instructor spent a lot of time talking about different strategies and guidelines for writing about history

Criterion 2 concentrated on how much experience the three subjects had with face-to-face conferencing at the high school and university levels. In particular, because all three students are second-semester freshmen at N.C. State, they have had very few student-teacher conferences at the university level. Additionally, most of the students explained that they did not have many out-of-class conferences with high school instructors either. Both Shannon

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and Wes had writing conferences with university instructors in some form or another. Wes's conference was with a Modern American History professor who spent a great deal of time in his class explaining to the students how to appropriately write about history. For the purposes of this study, Wes's experience with his history professor shows that he has had some type of conferencing experience about his writing and as a result has a general impression of how a writing conference may be conducted at the university level. Shannon, on the other hand, has had direct experience with a writing conference at the university level with her English Literature II instructor. Shannon is an anomaly with respect to writing conference experience when compared to most first-year writing students at N.C. State. Traditionally, students at N.C. State take English 101 and then upper-level English classes. Through a mix-up and the necessity to take a class, Shannon has already enrolled in an upper-level English class before taking English 101. As a result, Shannon brings a fairly good impression of how a writing conference may be conducted at the university level. This experience will be important in other criteria as she is asked to compare her experience participating in the Web conference with other conferences for which she had participated.

Unlike Shannon and Wes, Mandy has had little-to-no out-of-class conferencing experience with any instructors at the university level. She mentioned that all of her out-of-class interactions with university instructors to this point had consisted of dropping by an office quickly after class to ask a quick question or clarify a point quickly. She has spent very little time interacting with instructors outside of the traditional classroom setting. However, during our interview, Mandy did explain some interactions that she had with her English instructor at the high school level that may be significant to this study. As a high school student, Mandy had an instructor who did not meet with students outside of class, but

instead talked to students about their papers during class. This instructor would read papers aloud to the class that he both liked and disliked, identify the student writer, and then comment or criticize the papers with the help of classroom discussion. Mandy explained during her interview that this process terrified her and many other students in the class, who felt like they could never ask the instructor questions without fear of public displays of their papers. Additionally, Mandy explained that this process made her feel as if there was only one way to successfully write a paper for this instructor and as a result she found herself constantly searching for the perfect writing formula. Indubitably, this experience has affected Mandy's impressions of the writing process, including peer reviews and instructor commentary, and may have even contributed to Mandy's heightened anxiety levels when she was asked to participate in the Web conference.

3.1.3 Criterion 3

Table 3.3 "Interview Responses to Criterion 3"

Criterion 3: Student's Initial Impressions of the Web Conference	
Shannon	• Felt that she would really enjoy participating in a Web conference from her home • She felt that it would take off a lot of her nervousness and would allow her to feel much more relaxed during the conference • In particular, she noted that she could better gather her thoughts together during the Web conference as a opposed to a traditional face-to-face conference
Mandy	• She enjoyed the Web conference because she liked getting my feedback and knew that I would eventually be grading her paper • She liked talking about each aspect of the paper in chronological order and enjoyed getting my oral feedback because she felt as if she were in an atmosphere that allowed her to understand all of my comments and ask questions where necessary
Wes	• He really enjoyed going through each aspect of the paper and talking about it in a conversational manner as opposed to a one-way discussion from instructor to student

This criterion asked the students to give me their initial impressions of the Web conference before I began asking them more detailed questions about their experiences. All three students felt that the conferences were successful to one degree or another because they were able to receive my oral feedback on their papers. Additionally, the students mentioned

that they enjoyed going through the draft, paragraph by paragraph, and felt that this intensive attention to their drafts allowed them to fully understand my comments and ask questions as they remembered that they had them. Additionally, these three subjects all felt that the conferences were set in a somewhat informal environment and as a result the students felt that this atmosphere allowed them to relax and engage in a two-sided conversation with me as opposed to a one-sided conversation where the instructor talks at the student. Finally, Shannon also mentioned that she felt like it was nice to be able to see my facial expressions and hear my voice while looking at her paper, while still maintaining her personal space. Shannon explained (and the other two students agreed in other parts of the interviews) that her relaxed state and the ability to further maintain her personal space would have been even better if she had participated in the Web conference from her home. She explained that she was better able to gather her thoughts during the Web conference and felt as if she could ask questions during the conference, which she didn't feel nearly as comfortable doing in a traditional face-to-face conference. Shannon's statement, in particular, shows that the technological medium of the Web conference changes the environment enough from a traditional conference to allow the student to become more relaxed and to feel as if he or she could ask questions wherever they came up.

Finally, as an instructor, I must echo the claims of the students about enjoying going through the paper paragraph by paragraph. Since you can only see part of the paper at once, you must restrict yourself to specific sections. During traditional conferences, you are often faced with an entire paper at once and it can be somewhat difficult to narrow down your discussion to make it specific to local-level features. However, the Web conference allows you to look at each local feature individually and allows you to provide substantial

commentary on these features before continuing to the next. While this may seem more time consuming for instructors who may be conducting multiple conferences daily, it is important to note that all three of these conferences took between 15-25 minutes apiece, which is not that much more time than traditional face-to-face conferences. As an instructor, I found this technique to be very helpful for the student as it allowed me to restrict my discussion to one section at a time, which is much more tangible for the student to grasp as opposed to discussing the entire paper at once. Finally, it is important to note that there is an important textual and spatial difference between the amounts of paper visible in a Web or traditional conference, which could affect the quality of either conferences.

3.1.4 Criterion 4

Table 3.4 "Interview Responses to Criterion 4"

Criterion 4: Student's View of the Technology as an Asset or a Barrier to the Writing Conference	
Shannon	• She felt that the technology was an asset to the writing conference because she felt like it created the full effect of a face-to-face conference online • In particular, she cited how she liked that she had control of her computer, but that, if necessary, the instructor could take control of the computer to show her something • She also mentioned that she felt like the biggest challenge to conferencing at home would be the price of the Web cam and associated hardware, but she thought that if you could check out a Web cam from the library or somewhere that students would take advantage of this option
Mandy	• She felt that, in general, the technology was OK during the conference, but that in places the sound from the microphone began to break up and that made it a bit difficult to hear what the instructor was saying in places
Wes	• He felt that the technology seemed a little alienating, but that it was something that he could get used to with practice • In particular, he mentioned that it's difficult to be looking at the computer screen and into the Web cam at the same time in order to maintain eye contact with the other participant • He also felt that it would be much more convenient to have the conference from home when you could set up an appointment anytime without having to go anywhere • In particular, he felt that this convenience would make up for the fact that the technology was somewhat alienating • He had some problems with the sound in places and noticed that it would occasionally stutter and make it difficult to hear • He enjoyed being able to look at the same paper at the same time and being able to refer immediately to what the other person was talking about

Criterion 4 asks the students to consider the technological aspect of the Web conferences and to determine if they would consider the technology as an asset or a barrier to the writing conference. Shannon was particularly enthusiastic in her response that the technology was a complete asset to the writing conference. She felt as if the technology allowed you to maximize the scenario and to come close at replicating a face-to-face conference. She really enjoyed having complete control over her computer screen, but being able to relinquish that control if the instructor needed to show her a particular instance of something that she could not find or could not understand. Shannon did mention that one obvious barrier to using the technology is the price of the hardware. Everything used in this conference was free, except for the Webcam and microphone. This problem could be overcome if university libraries or English departments had Webcams available for checkout or loan to students. Some students would already have Webcams or would have access to them through their peers. Additionally, many schools already have Webcams available in their digital media labs or other similar places.

Both Mandy and Wes mentioned that at times there were some brief problems with their sound as the earpiece would stutter as the instructor talked, which required them to ask me to repeat things that I had said. I also noticed this during my conference with Shannon, but not with my conferences with Mandy or Wes. The microphones for both computers looked exactly the same and were not exclusively used by one computer throughout all three conferences, which leads me to believe that perhaps one of the microphones may have had some technological problems that were independent of the Web conference. As a result, then, it would be particularly important for both students and instructors to thoroughly test their equipment before their first Web conference to ensure that it was functioning properly.

Wes also mentioned that he felt that the technology was somewhat alienating at first because had never uses Webcams before. In particular he noted that it was somewhat disjointed in that you could not maintain eye contact with the instructor at times because you had to be directly looking into the camera, while also looking at the computer screen, which was impossible. Wes did say, however, that he felt as if this was probably due to the fact that he hadn't used a Webcam before and that he thought that the technology would become less alienating as he participated in more Web conferences or used Webcams in his personal life. Additionally, Wes echoed Shannon's thoughts about how he would like to participate in a Web conference from his home and he thought that this benefit of not having to go to the instructor's office for a conference would be much more important than the fact that the technology was alienating at times.

3.1.5 Criterion 5

Table 3.5 "Interview Responses to Criterion 5"

Criterion 5: Student's Impression of the Degree of Success of the Web Conference	
Shannon	• She felt that the Web conference went really well and that she got excellent advice on her paper • She felt like she got all of the feedback that she needed on her project and more • She felt like there was still a one-on-one relationship to the Web conference and that the Web conference accomplished the same things that a face-to-face conference would have accomplished • She also mentioned that this conference was the first time that she ever took notes during a meeting with an instructor; she said that she usually felt weird taking notes during a face-to-face conference because she felt like she needed to sit there and constantly agree with whatever the instructor was saying
Mandy	• She felt that the conference went well and that she probably got the same feedback that she would have gotten from a face-to-face conference • She was nervous at first, but she thought the conference was good because she was able to take notes on her own paper and still be able to see what we were talking about on the screen • She also felt like the medium helped her notice different aspects of her paper that she wouldn't have normally noticed because the paper and was right there in front of you • She felt that she did receive all the feedback that she needed on her paper and she enjoyed the Web conference as a supplement to the peer review process • She also felt more confident about her paper after the conference • For her, the biggest challenge to the conference involved the fact that she was so nervous before she came the conference • The biggest benefit, for her, was that she was able to hear my comments and go through the paper at the same time
Wes	• He felt that he received all the feedback that he wanted and needed • He thought that the Web conference did a successful job at replicating a face-to-face conference • He felt that the biggest challenge to the Web conference was getting used to the technology because he had never done any type of conferencing before • He felt that the biggest benefit of the conference was being able to go through the same page of the paper at the same time and he thought that the Web conference would be really convenient in a lot of situations.

Criterion 5 asked the students to think about the degree of success of the Web conferences. All of the students felt as if they had received helpful feedback from the instructor and that the advice that they received on their papers was probably very similar to the advice that they would have wanted to receive from a traditional face-to-face conference. Shannon mentioned that she thought that she received more feedback then she expected coming into the conference and she felt as if the one-on-one relationship between the student and the teacher was preserved during the Web conference as it would have been established

during a traditional face-to-face conference. Additionally, Shannon also mentioned that being physically removed from the teacher while preserving her personal space and still being able to hear and see the instructor, allowed her to feel as if she was able to adequately take notes (on paper) as we spoke during the conversation. She explained that this conference was the first time that she had ever felt comfortable enough to be able to take notes and that in previous conferences she had been somewhat uncomfortable by the instructor's immediate presence that she felt as if she needed to simply sit in the conference always agreeing with whatever the instructor said, only being able to ask a few questions at the end of the writing conference. Mandy also mentioned that the Web conference allowed her to notice specific aspects of her paper that she may not have previously realized and that she felt that being able to ask questions as we went through her paper was a very nice supplement to the peer review process. Additionally, Mandy also reiterated how nervous she was coming into the Web conference and said that this Web conference created a much more relaxed environment for her. In particular, she liked being able to scroll through her paper independently of me and then being able to hear my comments as she read what she had written. Wes mentioned many of the same things that the other students mentioned, including that he felt that the Web conference did do a successful job at replicating the experiences and results of a traditional face-to-face conference. His main concern regarding the success of the Web conference had to do with his feelings of alienation from the conference.

3.1.6 Criterion 6

Table 3.6 "Interview Responses to Criterion 6"

Criterion 6: Student's Preference for Future Conferences (includes both Student-Student and student-teacher conferencing)	
Shannon	• She said that she would definitely prefer to participate in a Web conference in the future rather than a face-to-face conference • She thought that she would receive the same feedback on her paper, regardless of the medium • She mentioned that a Web conference would be much easier for teachers because they would not be stuck in their offices nearly as much because they could go home and tell students when they would be available for Web conferencing • She also really enjoyed the idea of having a student-teacher conference in the privacy of her own home • She also explained that she thought that Web conferences with other students would also be beneficial because the student-student conferences would be much more down-to-earth and informal as opposed to a student-teacher conference • She felt like it wouldn't be a problem to stay on topic during a student-student Web conference because her personality type would make sure that the conference stayed on topic throughout
Mandy	• She said that she would prefer a Web conference if she didn't feel comfortable around the instructor, but that she would prefer a face-to-face conference if she felt like she could sit down and comfortably have a conversation with the instructor • She said that she would enjoy being able to have her space from instructors who intimidated her • She felt like she would enjoy having Web conferences from her home because it would be nice to hop online quickly and ask a question in person, rather than through e-mail where the asynchronous aspect of the medium could be limiting; she also liked the idea of simply being able to talk to her instructor as a opposed to writing lengthy e-mails • She said that she would probably not be comfortable engaging in Web conferences with other students because she felt like it would be weird and she didn't like the idea of confronting someone about his or her paper in person; she prefers to write down her comments and let the writer digest her comments alone • She did mention, however, that if she had to have a face-to-face discussion with a student about his or her paper that she would prefer to do it through the Web as opposed to in-person in class • She also felt like the Web conference needs some type of direction and that it would be difficult for two students to obtain this type of direction and authority
Wes	• He said that he would still prefer a face-to-face conference over a Web conference because it was the most familiar for him and he liked the idea of actually sitting down and talking in person • He felt that if he used a Web cam more in his personal life that he would be more comfortable having Web conferences as opposed to face-to-face conferences • He felt that the Web conference would be a good supplement to conferencing, but that it doesn't really replace face-to-face conferencing because he felt that being physically close to the other participant was important for comfortable conversation • He thought that participating in a Web conference with other students would be a good idea because the technology helps keep the conversation fairly informal and that it would be easy to focus on the paper and stay on topic throughout the conference.

Criterion 6 asked the students to consider the possibility of future Web conferences

and to think about how comfortable they would feel participating in future conferences from

their homes with both their instructors and other students. All responses are based on the premise that Webcams and microphones are readily available for their use. All three students explained that they would enjoy the convenience of being able to participate in a Web conference from their own homes. Shannon said that she would choose Web conferences in the future over traditional face-to-face conferences because she felt as if she would receive the same feedback, regardless of the medium and that Web conferencing would be much more convenient for her personally as a student who commutes to school. Thinking as a potential language arts teacher, Shannon also mentioned that she thought that future Web conferences would also be far more convenient for writing instructors because they would not be restricted to their offices for writing conferences and they could theoretically hold conferences at any time during the day that it was convenient.

Mandy also agreed with Shannon about the convenience factor of Web conferences, thinking that as a student it would be nice to hop online at night if she knew that her instructor was available and being able to converse with her instructor in a synchronous format as opposed to the asynchronous format that she is usually restricted to with e-mail. Additionally, Mandy felt that this conversational aspect would allow her to elicit more helpful feedback from her writing instructor because many times e-mails can be confusing and it would be nice to pinpoint specifics in her paper. Mandy was divided when asked how she would prefer future writing conferences to be conducted. She said that her preference would completely depend on the instructor and how comfortable she felt interacting with that instructor. She mentioned that if her instructor seemed unapproachable or difficult to talk to that she would much rather be able to enjoy her personal space and talk to the instructor through a Web conference from the privacy of her own home. She felt that being physically

removed from an intimidating instructor would allow her to feel more comfortable to ask questions and to digest the comments that she was receiving from her instructor. On the other hand, Mandy said that if she felt comfortable with an instructor and felt as if she could sit down and have a relaxed conversation with her instructor about her paper, then she would prefer to have a traditional face-to-face conference. She said that she would miss being physically close to an approachable instructor because she felt that it would not be possible to reproduce completely the dynamics and mannerisms of a traditional face-to-face conference.

Wes said that at this stage of his life, with his current comfort level with the technologies needed, that he would still like to participate in a face-to-face conference because he, like Mandy, truly enjoyed the dynamics of a face-to-face conference and that he was most familiar with that experience at this stage. Wes did note, however, that as he continued to use Webcams in his personal life and as he became more comfortable with the technology that his decision may change.

The above responses concentrated mainly on the students engaging in a Web conference with their writing instructor. When the students were asked how they would feel about participating in a Web conference with other students their responses were more varied. Both Shannon and Wes were enthusiastic about participating in student-student Web conferences,[2] citing that it would be nice to have a way to engage with other students outside of class. Additionally, Shannon and Wes explained that since the student-teacher conferences were fairly informal, that the student-student conferences would also be much more informal and that it would be very easy for the students to talk to each other. Neither

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[2] As explained to the student subjects, a student-student Web conference would ask the students to participate in a multi-textual peer review process that would ask them to have a conversation about their papers, while also making notes and comments about the conversations and the comments. In general, as discussed in these interviews, these conferences would occur outside of the classroom.

Wes nor Shannon felt that it would be difficult for the students to stay on topic and focused on writing during the conferences. In particular, Shannon explained that her personality would ensure that everything that needed to be accomplished during the conference would get done by the end of the student-student conference. On the other hand, Mandy was initially uncomfortable with the idea of participating in student-student Web conferences. She felt that it would be difficult for her to critique someone's paper to their face as opposed to writing down comments on the paper and returning them back to the student at the end of peer review. In particular, she noted that she thought it might be difficult for two students to maintain the type of direction and focus needed for a successful Web conference and as a result felt that it would be necessary to have someone capable of leading a coherent discussion. For this very reason, if an instructor decided to use student-student Web conferences during peer review, it would be helpful for the instructor to pair up the students to ensure that that the students who are particularly focused and capable to lead or direct a Web conference could be paired up with students who were not as comfortable in leadership roles. Finally, as Mandy and I talked during her interview, she did mention that if she was asked to sit down and have a conversation with another student about that student's paper, where it would be necessary for her to verbally defend her comments, then she would feel much more comfortable conversing in a Web conferencing setting, as opposed to a traditional, in-class face-to-face setting. It appears then, that for Mandy in particular, that the Web conference allows her to be more assertive in her discussions with students and instructors with whom she does not feel particularly comfortable. This is an important observation from this study, as it indicates that some students who are intimidated in the writing classroom may feel more empowered and assertive in a Web conferencing setting.

3.1.7 Criterion 7

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Table 3.7 "Interview Responses to Criterion 7"

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Criterion 7: Student's thoughts about recording future Web conferences for personal review	
Shannon	• She thought that it would be good to record the Web conference so that both students and instructors could re-watch the conferences and learn to ask better questions • She also thought that by re-watching the conferences that you could learn different things each time because you would probably find something new each time
Mandy	• She thought that it would be good to record the Web conferences for her own purposes in order to help clarify confusing parts of the conference or to go back and watch parts of the conference about which she had forgotten • She also thought that she might be able to enjoy the conversational aspects of the conference if it was recorded because she wouldn't feel like she had to take down every note throughout the entire thing
Wes	• He could see where it might be advantageous to record a conference when the subject matter was something really important like a final project • In general, however, he felt that if the conference was going to be informal that it would be a good idea to not record the conference because it wouldn't really need to be preserved and it felt that it was a little too *1984* to record all of the conferences

Criterion 7 asked the students to consider the possibility of recording the Web conferences for their personal use and if they felt that these recordings would be helpful for the writing process. Shannon indicated that she would like to record the Web conferences and that she felt that these recordings would be beneficial for both students and instructors. She thought that for both parties that it would be helpful to watch the conferences to help clarify any confusion and to use each conference as a learning activity where students and instructors could learn how to ask better questions during the conferences. Additionally, Shannon thought by watching the conferences after you had participated, that you would most likely remember different things that you had forgotten. Mandy also liked the idea of recording the Web conferences because she thought that recordings could help clarify confusing parts or things that were forgotten. In addition, she thought that it might be helpful to record the conferences because you would not have to take down every single thing that the instructor had said and as a result could engage in more of a conversation with the instructor. Wes had mixed feelings on recording the Web conferences. On one hand, he

could see how the recordings could be beneficial learning opportunities, particularly if the conferences had to do with a major project. However, Wes also felt uncomfortable with the idea of constantly preserving these interactions and mentioned that the idea seemed somewhat Orwellian. He finally decided by the end of the interview that it would be best to delete the recordings unless the project lent itself to a situation where it might be necessary to revisit the conference experience.

3.1.8 Criterion 8

Table 3.8 "Interview Responses to Criterion 8"

Criterion 8: Student's level of anxiety compared between a face-to-face and Web conference	
Shannon	• She felt that she was less anxious coming to the Web conference as opposed to a face-to-face conference because she had no idea what to expect when she arrived • She said that she was less anxious during the conference because of the physical separation from the instructor, which she thought allowed her to get her thoughts together better during the actual conference • She liked the fact that you maintained your personal space and distance and that she would be able to step away from the conference if necessary when she was at home • She also felt like she could better take notes during the conference because the instructor wasn't sitting there constantly watching the student
Mandy	• She was very nervous coming the conference because she didn't know what was going to occur and she was scared that she wouldn't know what to say • She felt that since she had participated in a Web conference that she would be much more comfortable during future conferences because the experience wasn't as bad as it could have been • She also thought that it might be helpful for an instructor to show snippets from sample Web conferences during class so that students would know what to expect before they participated in an individual Web conference • She also mentioned that students would probably feel relieved to see that the conference could be much more informal than they might think
Wes	• He said that he might have been a bit more anxious coming to the Web conference, but that it wasn't too big of a deal • He said that he thought the slight increase in anxiety was because the Web conference was just a new experience for him and he didn't know what to expect • He thought that this anxiety would disappear after he had participated in a few more Web conferences, both in his personal and academic lives

The final criterion asked the students to think about how anxious they were before they came to the Web conference and how anxious they would feel about engaging in future Web conferences. Additionally, the students were asked to compare the anxiety caused by the Web conference with the anxiety that they might experience from participating in a

traditional face-to-face conference. Shannon mentioned that she was less anxious participating in the Web conference because she had no idea what to expect and decided that she was not going to think about it until she arrived at the conference. She said that during the actual conference that she much less anxious then she might normally be during a traditional face to face conference because she was able to maintain her personal space and a certain difference from the instructor. Additionally, Shannon also felt less anxious taking notes during the Web conference because of the preservation of her personal space and she did not feel as if she needed to maintain eye contact (or even look at the instructor) throughout the Web conference. Wes also had similar reactions to anxiety with respect to the Web conference. He said that he may have been slightly more anxious before he came to the Web conference because he did not know what to expect, but he indicated that this anxiety would most likely go away after he had participated in a few other Web cam interactions, both within his personal and academic lives.

Mandy had a very opposite reaction, in terms of anxiety, when she was initially asked to participate in the Web conference. She was quite nervous because she did not know what to expect and she was scared that she would not know what to say once the Web cam began rolling. In hindsight, Mandy said that the Web conference was not nearly as scary as she initially thought and she said that she would be much less anxious and more willing to engage in future Web conferences. She also mentioned that most of her anxiety disappeared once the Web conference began. When asked how it might help other students in her situation to feel more comfortable coming to their first Web conference, Mandy indicated that it might helpful to show snippets of past Web conferences that had been recording to a class before they were asked to participate in a Web conference. She thought that actually

being able to visualize what takes place during a Web conference would help ease other students' anxiety. In particular, Mandy noted that once students realized how informal a Web conference could be, she thought that they would be much more apt at participating in their own Web conferences.

3.2 Results and Discussion from Shannon's Web Conference

Shannon's Web conference took place on Wednesday, February 1, 2006 between 12 and 1 p.m. When Shannon arrived at the conference she was enthusiastic to participate and had already signed her Informed Consent Form for Research. I briefly gave a quick introduction to the technology that we would be using and I showed her how to access all of the different features on the computer. Once she felt comfortable with the computer, I left her alone and walked down to another cubicle where my laptop was already set up. Once we had checked the audio levels and confirmed that everything was working properly, we began the Web conference.

I began the Web conference by asking Shannon what questions she had about her first draft of Project 1. Shannon's primary concern with her draft had to do with how she used paraphrases and quotations to cite her sources. In particular, she was worried that she wasn't properly documenting her paraphrases correctly. I asked her to point out a specific instance that she was concerned about in the paper and she quickly found an example that she helped me locate by telling me the page number where the paraphrase occurred and then reading the first few words. Once I found the example, I read the paraphrase aloud. After I read the paraphrase, both Shannon and I found the page number that she cited and read the original source material to ourselves. As we read, we saw that she had done a successful job at paraphrasing the material correctly and Shannon said that she did feel comfortable with the

other paraphrases in her paper as well. It was this point in the conference, however, that I realized that Shannon had been citing the wrong chapter in our textbook. The textbook is structured so that the first chapter discusses writing in the sciences and the second chapter discusses writing the social sciences. In both sections, the authors talk about performing independent research and how to report that research in writing, according to the typical standards of the field. Therefore, Shannon had become confused and had cited information about the guidelines for writing a title in the social sciences, as opposed to the typical guidelines for writing in the sciences, as required by the assignment prompt. I explained the difference to Shannon and, after some initial confusion, she understood what I was explaining and realized that she would have to change many of her sources throughout the paper.

With that matter cleared up, I asked Shannon if she had further questions about her first draft. She asked a second question about proper citations in MLA format and again I asked her to find me an example. As Shannon was looking for an example, I noticed that my earpiece was beginning to break up a bit, so I asked Shannon if she was having any difficulty hearing me. She said that she wasn't having any problems and the problem quickly resolved itself on its own with my earpiece[3]. Unfortunately, this question did create a necessary break in our academic discussion, but the break was very brief (approximately 5-7 seconds) and we were able to return back our discussion quickly. This break does introduce a new element to the student-teacher conference and it could not be predicted or prevented, so it is important for instructors to expect that it might be necessary to stop the Web conference for a few seconds (or perhaps longer, if there are serious technical difficulties).

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[3] In hindsight, I think that this earpiece issue is because of a faulty piece of equipment because both Mandy and Wes also mentioned that they had some problems hearing me in a few places during their Web conferences.

Luckily, for Shannon and me, the conversation break was brief and did not seem to intrude too much upon our discussion.

In analyzing our Web conference a few days later, I noticed that when I asked Shannon to search through her paper to find an example to illustrate her citation question that she minimized the window that was displaying my video image. Therefore, for the next few minutes of the Web conference, Shannon did not have my picture displayed, but continued to talk to me through the microphone. In a couple of other places throughout the Web conference, Shannon did the same thing as she searched through her paper to find specific examples or to follow along. Figure 3.1 shows a screenshot from Shannon's desktop, where my video image is not displayed.
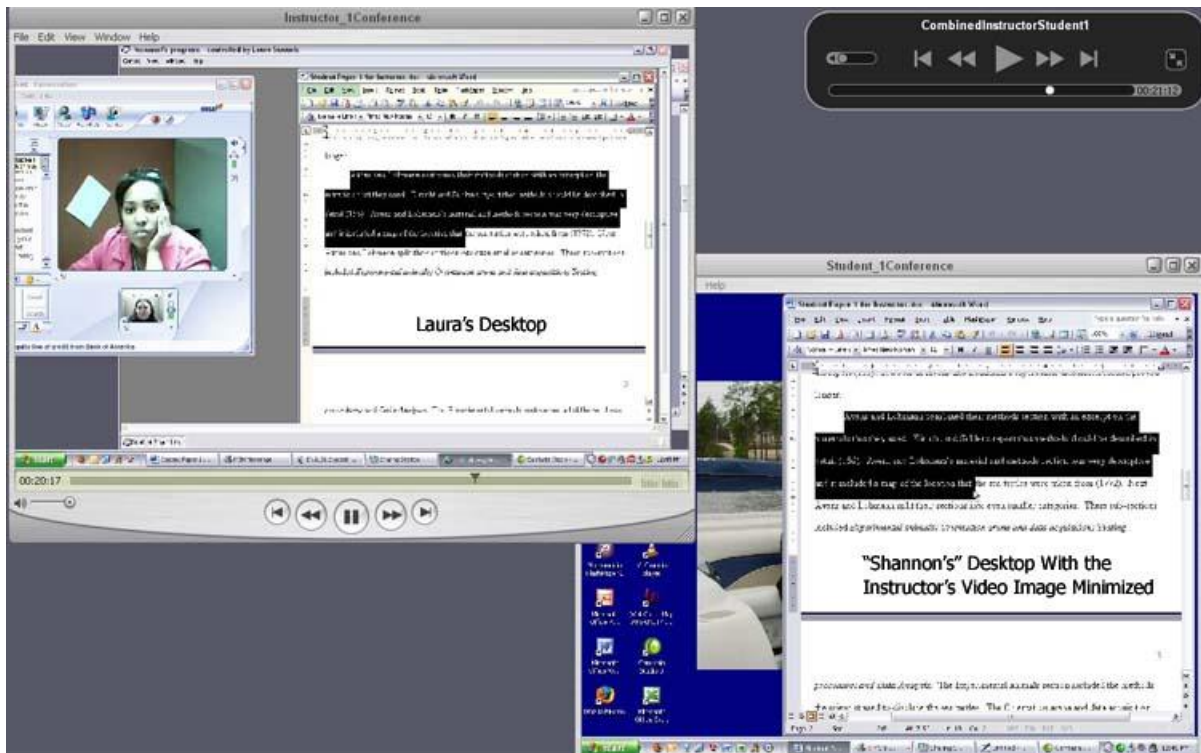

Figure 3.1 "Screenshot from Shannon's Web Conference with the Instructor's Image Minimized"

Most likely, Shannon minimized the video screen because it was intruding on her MS Word screen as she was reading the text. Since she did leave the video screen minimized for a

couple of images, it is possible that Shannon minimized the screen by accident during the conference and did not know how to restore it during the conference. However, this is unlikely, because Shannon indicated in her post-conference interview that she was very familiar with IM and used it daily. This phenomenon is very similar to some traditional conferences when students constantly look down at their papers or notebooks and avoid eye contact with the instructor with the hope of psychologically "blocking" a teacher's presence. Additionally, at a later time during the Web conference, Shannon restores my video for a few minutes, only to minimize it later in order to get a better look at her MS Word screen. The computer that Shannon was using had a smaller monitor than the laptop computer that I was using during the conference, therefore the IM screen was not nearly as intrusive or noticeable when using a wide-screened monitor. In fact, throughout all three conferences, I did not have any problems with the screen covering any portion of the MS Word screen. Shannon's minimization of the video screen is interesting because it indicates that being able to see the other participant during the conference is not necessary. In other words, the audio component of the conference is the integral part of the meeting and students could get the same effect from the conference with only a microphone. However, while the image isn't necessary throughout the conference, it is useful to have at the beginning and end of the conference because it helps establish the fact that you are having a face-to-face meeting of sorts. Additionally, the video image is also useful in places during the conference when it is important to see the other participant's mannerisms and facial expressions.

After I answered all of Shannon's initial questions about her paper, we proceeded to go through her paper paragraph-by-paragraph discussing how she organized each paragraph and how she supported her claims with direct textual support. As I led the discussion, I was

careful to verbally announce what paragraph I was discussing to help Shannon follow along

on her own desktop. For example, I would say, "OK, now I am moving from your first body

paragraph on the Introduction to the next paragraph on the Methods section" and I would

give Shannon enough time to follow along with me. As we went along, I realized that there

were a few things that Shannon would need to remember to revisit after the meeting, so I

suggested that we open up the Whiteboard feature and could use it to make a list of

communal notes and suggestions that Shannon could printout and take home with her after

the meeting. Figure 3.2 shows what the Whiteboard looked like on both desktop screens.

Figure 3.2 "Screenshot of the Whiteboard Screen from Conference 1"
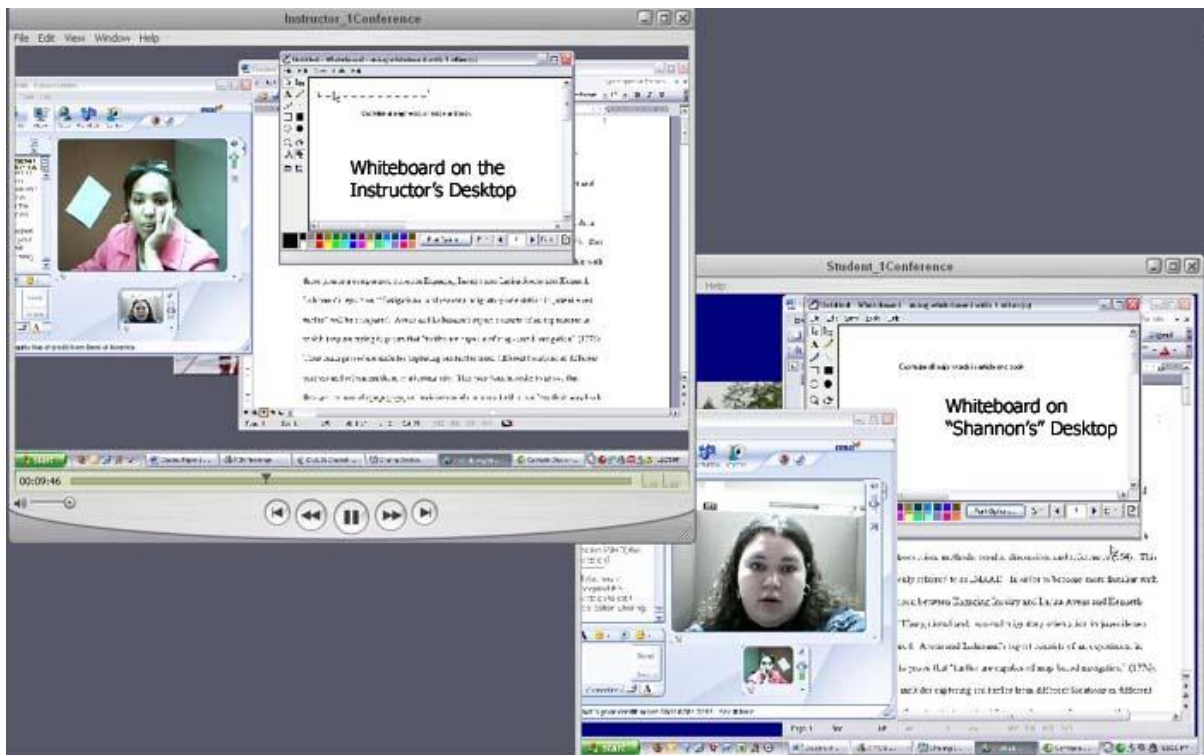
Although it is impossible to read in this view, the Whiteboard screen notes that Shannon

needs to capitalize all of the major words in a title when she is writing in MLA format.

When I initialized the Whiteboard session, I hoped that Shannon would use it during the Web

conference to make additional notes; however, as the conference continued I noticed that

Shannon was taking notes with pen and paper as we were talking. During the post-conference interview, Shannon told me that she had never previously taken notes during a student-instructor conference, but that she felt that the Web conference provided her sufficient personal space that she felt that she was free to take notes and that it wasn't necessary for her to maintain eye contact with me throughout the conference.

For the most part, it was easy for Shannon to follow along on her own desktop, as I provided Shannon with verbal clues as I moved from section to section in her paper. As we neared the end of our discussion, there were a couple of times that Shannon had difficultly following me, so I opened up the Remote Access feature and Shannon let me take control of her MS Word document. Once this occurred, I would highlight specific passages on my screen and Shannon could see what I highlighted on her own desktop. Shannon and I continued to discuss certain points verbally; however, once I took control of her screen, I noticed that Shannon became much less assertive about specific points in her paper. Additionally, there were certain places where Shannon would point something out on her screen and would only point to that place on her screen, forgetting that I could not see that at which she was pointing. Luckily we were moving slowly enough that I was able to discern where Shannon was pointing and we could talk about those specific parts of her paper. In hindsight, however, I am glad that I did not take control of her MS Word screen until we neared the end of the conference because it placed Shannon in a much more passive role and the use of Remote Access in this manner tended to reinforce the authority of the instructor, rather than reinforce the idea that the two of us were having an informal conversation about her paper. In future Web conference, I would use the "take control" feature in remote access

sparingly to help students find a specific place in their paper, but I would immediately give control back to the student to keep the conversation much more two sided.

Overall, Shannon and I both viewed the Web conference as successful. As a student, she felt that she was able to ask all of her questions during the conference and she liked that we were able to talk about her paper together. As an instructor, I felt confident that Shannon understood all of my feedback as we talked and I liked the intensive discussion that we had about the paper. The limitations of the computer screen required that we talked about one paragraph at a time, which was particularly nice for this specific assignment. Additionally, since this was the first paper that Shannon had written this semester, it was nice that we were able to specifically talk about how she supported her claims with direct textual support and how she organized her paragraphs. Shannon's Web conference was complemented with additional comments that I wrote on her paper a few days after the Web conference and when she turned in her final draft of Project 1, it was evident that she made many revisions to her paper that we specifically discussed during the Web conference.

3.3 Results and Discussion from Mandy's Web Conference

Mandy's Web conference occurred on Thursday, February 2, 2006 between 10 and 11 a.m. When Mandy arrived at the conference, she did not seem overly nervous, but she certainly was not quite as ease as she usually appeared during class. I spent more time explaining to her how the technology would work than the time I spent with Shannon in order to help her become more comfortable with the computer. With Shannon's conference, I was able to open windows quickly and give a brief synopsis of their features and Shannon immediately understood what the features did. With Mandy, I spent time showing her how each feature worked, which appeared to help her become more comfortable with the

technology. Once I had answered all of Mandy's technological questions, I left her alone and walked over to my laptop, which was located in a different cubicle than the cubicle that I had used during Shannon's Web conference. As I was getting set up with my laptop and ensuring that the audio was working correctly, Mandy was setting up her personal space, pulling out all of her notes, former drafts, and textbooks.

Once we were both ready, I began the Web conference by asking Mandy what questions she had about her paper. Mandy was particularly concerned about her introduction because it seemed too long to her, so I asked her to explain to me what she had included in her introduction. As she spoke, I skimmed through her introduction on my desktop. As discussed in the introduction, we determined together that she had successfully included everything necessary in her introduction and I suggested that she break up her introduction paragraph into two paragraphs to help it not seem quite as long. Once Mandy created these paragraph breaks on her paper, she said that the introduction looked much more visually appealing to her now and she said that she felt much more comfortable about the introduction.

At this point during our discussion, Mandy asked me to repeat myself a couple of times because the earpiece was breaking up. Again, like with Shannon's conference, the technology did create a break in our discussion and Mandy and I had to talk about something other than her paper. Luckily, this break only intruded into the conference for a few seconds and we were quickly able to return to the paper. Throughout the rest of the conference, I made a conscientious effort to speak slowly enough that Mandy would be able to follow me along if the earpiece stuttered again. Mandy made no more complaints during the Web conference of technological issues.

As we worked our way through Mandy's paper, I noticed that Mandy had some issues maintaining a formal tone throughout her paper. When I mentioned this to Mandy, I could tell by her facial expressions and mannerisms that she was not following what I was explaining, so I pointed to a specific instance on Mandy's paper where I thought her tone was too informal. In the paper, as she discussed the title of the scientific report she was analyzing she had written, "It is not dressed up, but just describes the whole scientific report in nine words." When I explained the difference between formal and informal tone, I could tell that Mandy was still confused. At this point, I read aloud that sentence and the sentence that preceded it and I was able to change the inflection of my voice to highlight how the above sentence was a bit informal. After reading the sentences, I explained that it sounded as if Mandy was telling me about the title verbally, as opposed to writing about the title. The changes in the inflection of my voice, coupled with the additional explanation, helped Mandy understand the difference in tone. Additionally, at a later time during the conference, Mandy was able to pick out an additional instance where her tone became more informal. After analyzing this interaction, I notice how much easier it was for Mandy to recognize the difference once she heard me read the sentence aloud. This indicates that a Web conference could be particularly helpful for a student who has a question about a paper comment the night the night before the paper was due. The audio aspect of the interaction was central to Mandy's comprehension, which would be difficult to accomplish via IM or e-mail exchanges.

Throughout Mandy's conference, I continued to give her oral signposts as I went from one paragraph to the next. Throughout the Web conference, Mandy followed along as we went through her paper. Since Mandy's Web conference occurred after Shannon's Web

conference, I decided not to use the Remote Access feature because I was worried that Mandy might become less talkative. Throughout the Web conference, Mandy was particularly talkative. As we went through each paragraph, Mandy usually had a question about organization, support, or citations. Because she was so talkative, the Web conference had a much more informal and conversational feel to it. In particular, when I would point out a specific section of Mandy's paper that might need revision and explain the issue, she would immediately make some suggestions about how to integrate my suggestion into her paper. In addition to being particularly engaged with the conversational aspects of the Web conference, Mandy was also constantly flipping through her notes and textbooks, in order to check quotations and to reaffirm some of the points that she was making in her paper. As we talked, Mandy would constantly make notes on a separate sheet of paper. For this reason, I never introduced use of the Whiteboard with Mandy because I felt that she had already established her note taking routine. Because of Mandy's personality type, if I had introduced the Whiteboard, I think she would have felt compelled to use it and would have felt awkward taking notes in this manner.

As with Shannon's conference, Mandy also had some problems placing the video image of me on her desktop screen during the Web conference. However, unlike Shannon, Mandy never minimized the IM screen. In a couple of places, she would move the screen around as she skimmed through her paper or tried to read text; however, my video image always remained visible. In other words, Mandy was simply recreating the Web conference space as the conference progressed so that her desktop best suited her needs. Correspondingly, at different times during the Web conference, Mandy and I would both look directly into the Web cam as we spoke. Doing this allowed the other participant to look

directly at the speaker, which minimized the disjointedness of looking at the Web cam and the desktop screen. Since Mandy kept the visual image of me up throughout the Web conference and she recognized the importance of looking directly into the Web cam, it indicates that, for Mandy and some other students, that the visual component is integral to the Web conference. Most likely, this visual component helps create a connection between the instructor and the student. This connection is established when both participants can see each other's mannerisms and facial expressions.

Overall, Mandy's Web conference was successful. When she left the Web conference, she felt that she had received all of the feedback that she needed and wanted and I felt confident that we had covered everything that needed to be discussed about Mandy's paper. As with Shannon's paper, Mandy also received written comments from me after the Web conference. When Mandy turned in her final draft of Project 1 for a grade, it was evident that she made many of the revisions that were suggested during the Web conference.

3.4 Results and Discussion from Wes's Web Conference

Wes's Web conference occurred on Monday, February 6, 2006 between 10 and 11 a.m. Whereas Shannon and Mandy's Web conferences lasted between 25 to 30 minutes, Wes's conference lasted less than 20 minutes. When Wes arrived at the conference, he did not seem nervous in any way. In fact, he was pretty cool and collected for all of the Web conference, which is very similar to his personality during class. He needed very little instruction about how to use the technology and seemed very comfortable in front of the computer. I showed him all of the programs that we would be using during the Web conference and he had no questions about how to use the different software programs. When

I left Wes in front of the computer to go to the cubicle where my laptop was located, he had taken out his English 101 notebook and textbook.

When I was settled in front of my laptop, Wes and I both checked the volume of our microphones and earpieces and we began the Web conference. As with the previous two conferences, I began by asking Wes what questions he had about his first draft. Wes said that he had completely understood the assignment sheet and as a result did not have any questions about his first draft. As I asked Wes what questions he had, Wes said that the microphone had stuttered and as a result he asked me to repeat my question. When I repeated the question, Wes had no problem understanding me and did not complain of any other audio problems throughout the rest of the Web conference. Visually, Wes was much more similar to Mandy, as opposed to Shannon. For example, when he would talk directly to me during the Web conference, he usually looked directly into the Web cam. Additionally, as I analyzed the Web conferences, I noticed that Wes also had issues moving the video image of me around on the screen. Like Mandy, he never minimized the image, but a few times during the Web conference, he would move the IM window around until he found a temporary home for it. Once he would scroll up or down through his paper, he would move the video image around to accommodate.

Throughout the Web conference, Wes was noticeably quieter than Shannon and Mandy. He asked very few questions throughout the Web conference and tended to nod in agreement, or say "Mmm…hmm" whenever I made suggestions for revision. Additionally, throughout the Web conference Wes seemed to be making mental notes about my comments, but made very few written notes on paper. He made no notes on the Whiteboard screen, in his MS Word document, or on a separate sheet of paper. These comments are not said to

indicate that Wes seemed disinterested or unwilling to participate; instead, it appears that

Wes's personality lends itself to this type of learning and conferencing style. Because Wes's

conference was conducted a few days after Shannon and Mandy's conferences, I was able to

provide my written comments on his paper before the conference. As a result, spread

throughout Wes's paper were comments that I had inserted via MS Word's "Insert

Comment" feature. Figure 3.3 shows what the paper looked like on both Wes and mine's

screens.

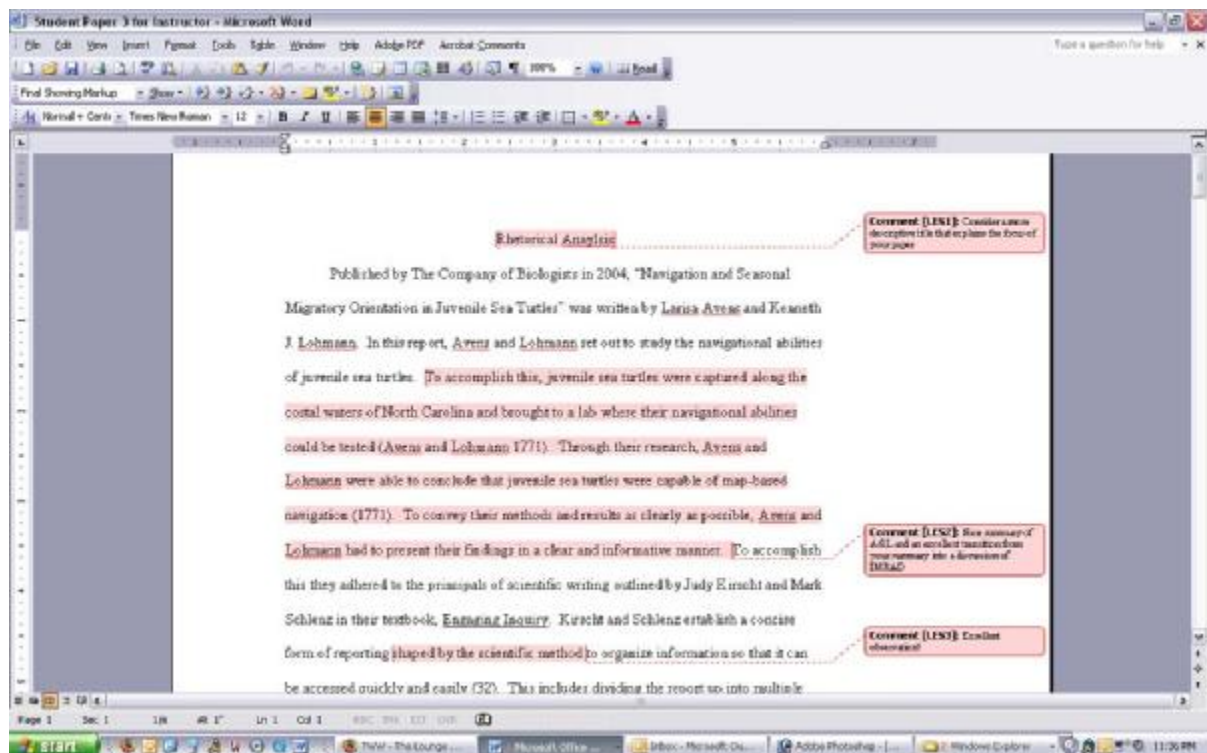**Figure 3.3 "Screen Shot of Wes's Paper with Inserted Comments"**

In Figure 3.3, the pink highlighting and bubbles in the margin are comments that I made

about Wes's paper before our Web conference. Since these comments were already present

on Wes's paper, it is likely that Wes did not take many notes during the Web conference

because he felt that I had already taken these notes for him with my comments.

As we proceeded through the Web conference, I elaborated on many of the comments that I had made on Wes's paper and I also discussed other aspects of Wes's paper that I did not have time to comment upon. As with Shannon and Mandy's conferences, I gave Wes verbal signposts as I went from one paragraph to the next, but I also found that since the paper was so visually cluttered with the pink inserted comments, that it was helpful to use the page number feature that is available at the bottom of the MS Word screen. When Wes did ask questions during the Web conference, I noticed that most of those questions had to do with me clarifying a written comment that I had previously made. In particular, one of the questions that Wes had during the Web conference had to do with some paragraph reorganization. Wes's results paragraph was noticeably shorter than his other paragraphs and a bit disjointed because he seemed to throw in a discussion about the images that appeared in the report that did not flow with the rest of the paragraph. I suggested that Wes rearrange his discussion of the images and include them within the section of the paper where the images actually appeared. When I made this suggestion, it prompted Wes to question how he might elaborate on what was left of the paragraph after he rearranged the discussion the images. I suggested that he add more direct textual support from his sources and then provide a detailed analysis on that support. Luckily, the two paragraphs that we were discussing were right beside each other in the text, so we were able to discuss them at once; however, had the paragraphs been located farther apart in the text, they would have been difficult to discuss during the paper because it would be difficult for both participants to be looking at two sections of the paper at the same time. This would be a spatial limitation of the Web conference medium that could be difficult to overcome.

As previously mentioned, Wes's Web conference was noticeably shorter than Shannon and Mandy's conferences. Part of this time difference is due to the fact that Wes had very few questions during the Web conference. At the end of the Web conference, I asked Wes what other questions that he had about his paper. Wes took about 45 seconds to come up with a question. Because I could see Wes's facial expressions, I could tell that he was scrolling through his paper to determine what he wanted to ask me. Since Wes was thinking during this time and not telling me where he was looking on his paper, I switched my window over to the Remote Access/Shared Application screen and I was able to follow where Wes was scrolling and see where he was focusing his attention. This was a useful technique for me because I was able to follow along and I was ready when Wes asked his question. After analyzing this part of the Web conference, I realized that this technique would have been particularly useful throughout all of the conferences for both the student and the instructor. Figure 3.4 shows how the Application Sharing appeared on my screen as I was following Wes through his thought process.
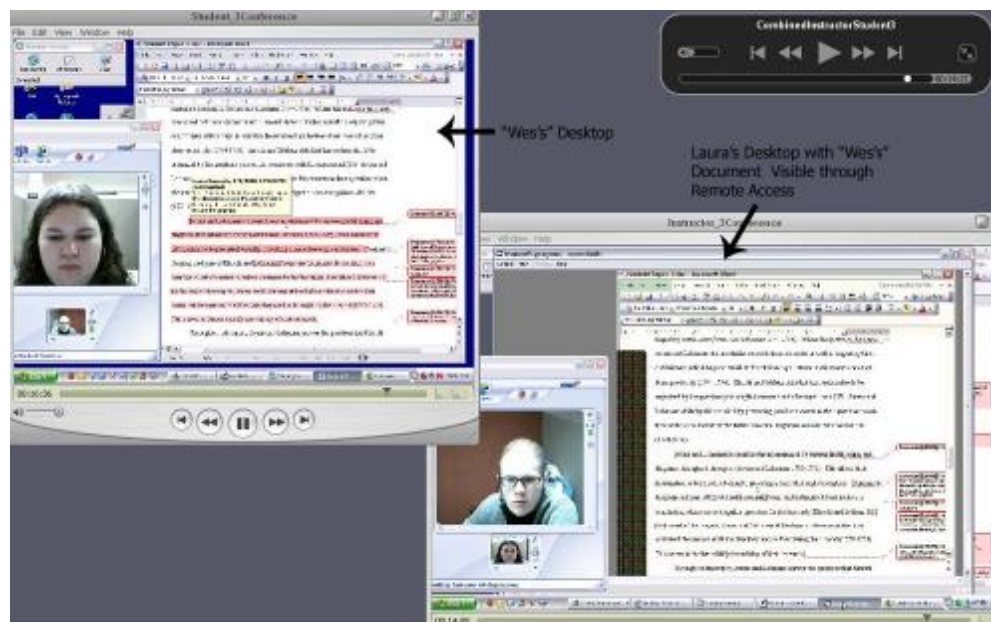
Figure 3.4 "Screenshot of Wes's Document Seen on Both Desktops with Remote Access"

As seen on in Figure 3.4, Wes is intently searching for a section of his paper as I follow

along through Application Sharing. I do not have control of Wes's screen, but I can see all of

the transformations or revisions he makes to his MS Word document. As you can see, the

Application Sharing window is sitting on top of my own version of MS Word with Wes's

paper. This feature would be particularly useful for both students and instructors because

both the instructor and the student's MS Word documents could be simultaneously shared

and as a result it would be possible for both the student and the instructor to follow the

other's thought and scrolling processes. Additionally, because it is not necessary for both

computers to have the same application installed on their computers, it would be easy for

both an instructor and a student to look at a paper in the same application, even if one party

did not have a software program. For example, if Wes had written and properly formatted

his paper in Microsoft Works (an application that I do not have installed on my computer),

then he could have shared the Microsoft Works application and I could have looked at the

paper at the same time as him through application sharing. In order to scroll independently,

however, I would have needed Wes to grant me control of the application, in order to take

control and make changes. Without the control, I could simply observe what Wes was

looking at on his screen.

In conclusion, like the two previous Web conferences, Wes's conference was also a

success. Wes had very few questions about his draft, but during our post-conference

interview he said that he had received all of the feedback that he needed and had expected

when he came into the Web conference. When Wes turned his final draft of Project 1 in for a

grade, he noted on his self-reflection sheet[4] that the Web conference had helped him answer all of his questions and had given him a lot of confidence in his writing and in his first draft. Additionally, when I looked at Wes's final draft, I noticed that he had made many of the revisions that we had talked about during the Web conference.

Overall, many important results came out of the three Web conferences and post-conference interviews. The three students reacted differently to the technology and expressed suggestions that help focus future research for other Web conferences. The following chapter investigates a summative analysis of all the conferences and interviews and ponders the results of the study and directions for future research in the field.

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[4] All students in my English 101 class were asked to complete a self-reflection sheet that asked them to think about their experiences completing Project 1 and then to reflect on what they might do differently with future writing projects.

Chapter 4

Summative Analysis, Implications, and Conclusions

The discussion provided in Chapter 3 analyzes all of the post-conference interviews together and looks at each Web conference separately. In order to thoroughly discuss all of the results in a slightly more comprehensive manner, the following section looks at all three Web conferences to provide a summative analysis. The last two sections provide a discussion of implications and conclusions from the present study.

4.1 Summative Analysis of All Web Conferences and Interviews

Many of the same results came out of all three Web conferences. All three of the student participants felt that they had received all of the feedback that they needed to successfully complete the project and in all three cases that was true. All three students received above average grades on their final drafts of the project and they all made significant revisions from their first drafts to their final drafts. In addition to the successfulness of the Web conferences, other important observations came out of this study. In particular, I noticed that the visual component of the Web conference was important to all of the students, but it was the audio component of the Web conference that was the integral part of the Web conference. The visual component helped set the stage for the Web conference and helps the participants see each other's facial expression and mannerisms, but it is not necessary throughout the duration of the Web conference. For example, in Shannon's Web conference, the most important aspect was the audio component and the visual component simply supplemented the experience for her; however, in Mandy and Wes's Web conferences the video images were used throughout the Web conferences, even if

the IM screen containing the video had to be constantly moved around during the Web conference to allow the user to scroll up or down in the paper. This problem would depend on the width of the user's computer monitor and may or may not affect a particular user.

Another important result from these three Web conferences has to do with how the students absorbed the information they received during the Web conference. For example, both Shannon and Mandy took handwritten notes during their Web conferences, whereas Wes only took mental notes during the Web conference. None of the students used the Whiteboard feature or a MS Word document to take notes. Therefore, this indicates that while the students did enjoy using the computer as a medium for the Web conference, they still preferred to handwrite their notes. This is probably because it would be too difficult to switch between multiple windows during the Web conference as would be necessary if the student elected to take notes on the computer. While this was a somewhat predictable conclusion, it is interesting that the Web conference did help students like Shannon feel comfortable to take notes during the Web conference because of the physical distance away from the instructor.

One particular limitation that I noticed from conducting the Web conferences is the inability to easily revise papers for global features. In other words, because the computer screen limits the amount of text that you can see at any given time, it would be difficult for both the instructor and the student to re-organize paragraphs from one part of a paper to the next. It would be possible for one participant to watch the other use the cut and paste features to re-organize paragraphs through Remote Access and Application Sharing; however, it might be difficult for each participant to reorganize simultaneously, while giving the other participant verbal sign posts as to where he or she is moving text. None of my Web

conferences involved very many global revisions, so it is difficult for me to say how these types of revisions might work in a practical situation. Instructors and students would need to see what would be the most comfortable and then use the technology in a way that effectively allows global revisions.

As I previously mentioned, remote access and application sharing can be used at many stages during the Web conference; however, the effects of these technologies may be different for multiple students. For example, I found that by taking control of Shannon's MS Word screen for a few minutes, it completely changed the dynamics of our Web conference and forced Shannon into a much more passive role during the discussion. It appears, then, that if the take control feature is used during the Web conference that it should be used for only a few seconds at a time, in order to help the instructor or the student pinpoint a specific location in a paper. On the other hand, the Application Sharing feature can be particularly useful during a Web conference if a student is particularly shy, quiet, or has trouble giving the instructor deliberate verbal signposts. In such cases, the instructor can follow the student's scrolling and facial expressions and mannerisms to help determine where the student is concentrating his or her thoughts. Simply being able to look directly at the exact screen that the student is studying gives the instructor more information about the student's thought processes and can help the instructor focus questions to a specific section of the text.

4.2 Implications

There are multiple implications for the present study. To begin, this study completely revolutionizes the idea of student and instructor "space" during a conference, while still allowing many of the same benefits that students receive from face-to-face conferencing techniques. In particular, this study may help improve pedagogical strategies for students

who learn in both traditional and non-traditional classrooms, while also helping instructors reach more students outside of traditional office hours. Finally, this study may also have important implications for student-student peer review and other important population samples.

4.2.1 Traditional Students, Distance Education Classes, and Student-Athletes

This present study has important implications for all types of university students, regardless of their personal situations. For example, at present, students who take English classes via distance education are often severely limited in the amount of face-to-face discussions that they receive from university instructors. If these students could conference with their instructors without having to travel long miles to campus, by remaining at their homes, the students would have significantly more time to dedicate to their writing and revision processes. In many situations, students develop writer's block and can not continue on an assignment without first discussing their options with their instructors. Many times, e-mail or other forms of textual communication are lacking in how they allow instructors to further explain main ideas or revision techniques. If a student, could quickly hop online at a time pre-determined by the instructor to be his or her virtual office hours, these students could continue working on their papers without having to pause to travel to the instructor's office. In addition to distance education and traditional students who could use these Web conferences, student-athletes who often travel during the week to away games would also be benefited. Traditionally, student-athletes have busy daytime schedules filled with classes, practices, and mandatory study halls, while their nights, when they may be traveling to away games, might be the only free time that they would have to meet with their instructors. These students do usually have a strong support system for academics, but tutors and consultants

will never replace an actual meeting with an instructor. If these students could meet with their instructors during their free time at night, they would be able to receive the same instructor support that is afforded to traditional students during the daytime. Additionally, Web conferences would also open up the possibility for these student-athletes to meet with their instructors from hotel rooms when they are traveling for sports.

4.2.2 Instructor Time and Space

This study may also have important implications for instructors who complain of not having enough time to meet with all of their students. The ability to hold office hours outside of normal business hours (when the students are actually writing their papers) could be particularly beneficial. These instructors would not be constantly tethered to a desk for large blocks of time and they would be available to hold impromptu mini-lessons with students who needed further clarification outside of the traditional classroom setting. Many instructors might argue that they don't have the time to be readily available during business hours and at night, which is certainly a valid concern. These instructors could reduce the number of brick and mortar office hours that they hold, in lieu of cyber office hours (perhaps one or two hours a week). It is also important to keep in mind that I was able to go through my students papers during our conference in about 25 minutes (on average). This is typically the length of traditional face-to-face conference, which indicates that the average Web conference would last about the same amount of time as the traditional face-to-face conference. Correspondingly, it may also be possible for instructors to conduct Web conferences with multiple students simultaneously in small groups, which would further reduce time demands on instructors and would also allow instructors to minimize the amount of things that they would need to repeat to students. Finally, because instructors would not

necessarily have to travel to and from campus on non-teaching days to meet with students, they would also gain the travel time that is usually spent in transit. Additionally, these instructors would not have losses in productivity times when students failed to show up for conferences because the instructor could simply keep working on his or her computer from home. Typically, depending on the computer setup, the Web cam and microphone could be permanently installed onto a computer, meaning that it would not be necessary for an instructor (or a student) to set up or reconfigure the Web cam or microphone settings with each new Web conference. This type of permanent setup would further reduce the amount of time necessary for technological attention.

4.2.3 Student-Student Web Conferences

Perhaps one of the most important implications for this study has to do with how it might alter student-student interactions outside of the classroom setting. One of the questions that I asked the students during their post-conference interviews had to do with how they might interact with other students outside of the classroom setting. In many cases, the peer review process is limited to in-classroom discussions because the class meeting time is typically the only time that students can get together to talk about their papers. While there may still be problems with students being unable to get together outside of class, it is possible that being able to engage with other students through Web conferences may provide students with a medium to meet outside of class, without giving up too much of their free time. Students could remain in their dorm rooms or at their homes without having to find a designated meeting places outside of the classroom. Two of the three students who participated in this study thoroughly enjoyed the possibilities of meeting with another student outside of class. The third student, Mandy, wasn't nearly as enthusiastic about having to

verbally defend her peer review comments to her peers, but she did say that if she was forced to talk about someone else's paper that she felt that she could be much more effective if she had the Web conference to physically separate her from the other student. Obviously, student-student Web conferences could become a waste of time if students did not remain on task throughout the conference. As a result, it would be necessary for instructors to establish clear peer review guidelines for Web conferences and to possibly pair up students, instead of letting students pick their own partners. By assigning students partners, instructors could pair up students with strong personality types with students with more timid personality types. As a result, the Web conference would have a clear leader and would have someone who felt comfortable directing the Web conference by a certain set of guidelines. In order to ensure that students were using Web conferences properly, instructors could ask students to record the Web conferences and turn them in for a grade or instructors could ask students to provide a quick written essay that asked each student to evaluate the other Web conference participant and/or the success of that particular student-student conference. Finally, if students were free to conduct effective peer reviews outside of the classroom setting, instructors would have more class time to lead expanded class discussions or in-class writing workshops.

4.2.4 Other Population Samples

The present study focuses only on traditional, first-year writing students at a major Research I university, who all have strong computer and communication skills. It does not, however, focus upon graduate students or other non-traditional students, who have not spent a lot of time using computer software for communication purposes. As a result, it will be necessary for further studies to be conducted with these "other" population samples. Many

graduate students have already developed the necessary computer skills required of the Web conference, but it is unclear how their writing experience might be affected by a Web conference. Traditionally, graduate students concentrate on more global revisions as they write and conference with instructors, so the Web conference might be better for these students at the brainstorming and invention stages. Graduate students could bounce ideas off their instructors and students and instructors could simply talk about the topic at hand without having to travel to the same meeting location. The important thing to note is that it is not always necessary to have a draft of a paper present during a Web conference. Instead, the Web conference may be just as useful as a conversational medium between instructor and student.

Correspondingly, further research would also need to be conducted about the success rate of a Web conference with a non-traditional student, who may not be nearly as comfortable with computer communications. Luckily, the technology used during this study is not too complex and could be learned by anyone who is willing. My hypothesis is that a Web conference should be useful for about anyone willing to learn and who is interested in participating, regardless of age or technical ability. If an instructor wanted to hold Web conferences with a class that was filled with many non-traditional students, he or she could easily hold 30 minute training sessions with a group of students to show them how to use and set up the technology. As a result, only further field studies will indicate if non-traditional students could reap the same benefits from Web conferences as the first-year writers in this study.

4.3 Conclusions

To conclude this thesis, then, I return to my two original research questions that I asked at the beginning. The first question that I asked was: What benefits and challenges do students and teachers find with online Web conferencing? The data that I gathered from conducting my post-conference interviews, coupled with my analysis of the Web conference recordings, indicates that there are both benefits and challenges to conducting the research questions. In particular, one benefit from the Web conference involved students being able to fully articulate their thoughts through the technological medium because they were physically removed from the instructor's presence during the Web conference. Correspondingly, another benefit to the Web conference is that it is possible that students may feel more comfortable talking to instructors, if they are able to be physically removed from the instructor's immediate presence. The instructor-student separation also indicated that some of the student participants were better able to absorb information from the instructor because they felt comfortable to take notes or to ask questions where they normally would have felt alienated. Additionally, students felt that the convenience of participating in Web conferences from their homes would be particularly beneficial for both students and instructors. Amongst other benefits, the Web conference also allowed students and instructors to predict the other participant's thought patterns by observing facial expressions and mannerisms, while being able to see where the other participant was looking via the Application Sharing feature.

In addition to the above benefits, there were also a few challenges to participating in the Web conference. At various times during the Web conferences, participants had trouble hearing through the ear piece. These technological problems introduced a non-academic

subject into the conversation that caused the participants to focus away from the paper. Additionally, because the Web cam and the computer monitor are not placed in the same exact locations, it is nearly impossible for the participants to look directly at each other during the Web conference. As a result, in some places, the conversation had a somewhat disjointed feel. As mentioned in the above paragraph, the Application Sharing feature was beneficial at times, but it was also somewhat alienating to some of the students. For example, when I took control of the Shannon's screen, it relegated her to a passive role where she simply sat and asked very few questions as I talked her through the last few paragraphs of the paper. Therefore, it is important that anyone who uses the take control feature should use it sparingly throughout the Web conference when it is necessary. Perhaps another related challenge to conducting the Web conference involves the use oral signposting to help guide the other participant. For example, during the Web conferences I would explicitly say "OK, Now I am moving to your paragraph on the Results." This statement seems a little forced and somewhat awkward during the Web conference and is a good example of some of the different sayings that were necessary during the Web conference to help the other participant follow along. The student participants also mentioned that one major challenge for them was the price of the Web cam and associated technologies.

The second research question that I asked was: How do these benefits and challenges affect the cyber replication of a face-to-face conference? In general, the conference participants and I felt that the Web conference did accomplish all of the goals that were necessary for the students to successfully complete Project 1. While some of the challenges were present throughout all three Web conferences and others were only present at certain times, for the most part, the Web conference's benefits outweighed the challenges. For the

most part, all of the challenges that were evident during these Web conferences were not overly intrusive for the Web conferences that were conducted as a part of this study. The price of the Web cam and the microphone (approximately $50) could be an issue for some students, but this issue could be easily reconciled if English departments or university libraries would purchase three or four Web cams for check out and circulation amongst the student body or university bookstores could offer the hardware at a reduced price for students. Additionally, Web cams are beginning to become more and more available for people's personal uses, so it is likely that most students would have access to a Web cam through their friends or family members. In general, it was possible to replicate a face-to-face conference through the Internet. Some of the conversations were structured a bit differently than they would have been if the Web conferences had been conducted face-to-face, but many of the students felt that the Web conferences were informal enough for them to feel comfortable throughout the duration of the Web conference.

As previously mentioned, these three Web conferences are only a small case study of the possibilities of Web conferencing and further investigations will need to be done on large population samples. In particular, it would be interesting for an instructor to use Web conferences with half of his or her first-year writing students throughout the semester to see how those students performed in the class when compared to other students who participated in traditional face-to-face conferences. This type of study would yield better results about how many different students would interact with their instructors during a Web conference. Additionally, the present study only looks at how first-year writers might approach a Web conference. Therefore, further case studies and observations with larger population samples will also be necessary with non-first-year writing students, such as distance education

learners, advanced undergraduate and graduate students, and students who are typically characterized as non-traditional. Finally, it will also be necessary for research to be conducted that will address how students might interact with one another during out of class Web conferences. Fortunately, the use of screen recording software can be used to record such Web conference proceedings, which will allow researchers to observe student-student Web conferences without needing to be immediately present, in some form for observation, during the Web conference. Once the above studies are performed, then the field will have a much better sense of the benefits and challenges for all types of writing students.

In summation, there are many different implications and conclusions from the present study, but these conclusions and implications are far from all-encompassing. This study attempts to inquire about the use of a new medium of communication for students and instructors. It does not, however, provide a recommendation to replace face-to-face student-teacher conferences with Web conferences. Instead, it provides suggestions for writing instructors as to how they might further supplement their teaching and conferencing strategies, in order to remain up-to-date with new technology that their students are experiencing daily. The hardware and software programs used in this thesis will continue to improve and become more efficient, but it will be difficult for this technology to ever be able to fully replicate all of the interactions present in a traditional face-to-face conference. I invite instructors to take bits and pieces from this study to find strategies that will be most efficient for their classes and to amend the procedures that they find the least beneficial. I encourage them to always keep in mind that it isn't the technology that is most important, but, instead, the knowledge gained by the student writers.

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Appendices

Appendix A

E-mail Inviting Students to Participate in a Web Conference

January 30, 2006

Dear Student,

As you may know, in addition to teaching your section of English 101, I am also a graduate student in the English Department at N.C. State University. As a part of my requirements to graduate with a Master's Degree in English, I have to write and defend a thesis. My thesis (under the direction of Dr. Chris M. Anson) involves studying writing classrooms and looking at the possibility of successfully replicating a student-teacher writing conference through Web conferencing software (such as instant messenger, Web cameras, microphones, etc.).

In order to complete my study, I need to conduct three out-of-class Web conferences about a writing project in English 101. As a result, I am asking you to help me with my research and participate in one of the Web conferences. Your work in our class to this point indicates that you would be an excellent subject for this study.

One of your requirements for English 101 is to engage in one out-of-class writing conference with me during the semester. If you decide to participate in my thesis research, your out-of-class Web conference would fulfill the requirement for an out-of-class face-to-face conference. During this conference, we would talk about your first draft for Project One: A Rhetorical Analysis of a Scientific Report. In general, the topics covered during the Web conference would be the same as those covered in the face-to-face conference .

If you are willing to participate, we will set up a time this week (January 30-February 3) to have the Web conference. You will meet me at my office (Tompkins 228) and I will give you a brief overview of the technology that you will be using during the Web conference and answer any questions that you have about the conference. You do not need to have any prior experience using the technology that we will be using during the Web conference. The actual Web conference itself will last between 20-30 minutes. During the Web conference we will discuss your paper and questions that you have about successfully completing Project One. Once the conference is over, I will ask you a few questions about your experience with the Web conference. In general, these questions will discuss how you felt the conference went and your thoughts about having future Web conferences with other instructors or classmates.

Both the online Web conference and your interview will be recorded for research purposes. The online Web conference will be recorded through the use of screen recording software and the post-conference interview will be recorded with an audio

recording device. The total time expected for the Web conference and the post-conference interview will be one hour.

As I analyze the Web conference in my thesis and during my defense, you will be referred to by a first-name pseudonym, so as not to reveal your true identity. I will make no mention of your true identity or to your grade for Project One (or any grades in English 101). In short, all of your grades for English 101 will remain confidential and will never be discussed with other researchers or instructors. The purpose of the conference is to study the student-teacher interactions during a Web conference, not your progress in English 101.

However, as I previously mentioned, your voice and your picture will be recorded during the Web conference and the post-conference interview, so it is possible that readers of my thesis and the audience at my defense may see your picture and/or hear your voice. Again, I will refer to you with a first-name pseudonym and make no mention of your true name. I will also remove all identifying information from your first draft of Project One before we begin recording the Web conference. If your true name is mentioned during the duration of the Web conference, I will edit it out of the recording and ensure that portion of the conference is never seen by the public.

Additionally, you are under no obligation to participate in this study. Electing to not participate will not impact your grade or your performance in English 101. If, at any point during the Web conference or interview, you feel uncomfortable and no longer wish to participate, you can say so and we will immediately stop the conference and I will destroy any recordings previously made.

This project and study have received approval from N.C. State's Institutional Review Board for the Protection of Human Subjects in Research. Attached to this e-mail is an informed consent form approved by NCSU IRB that explains your rights while participating in the conference. Please read over this form carefully and let me know if you have any questions about the project. If you agree to participate, you will sign this form before we begin the Web conference, I will make a copy of it for you to keep, and I will keep the original for my records.

Finally, I do hope you will consider working with me on this project. Please let me know at your earliest convenience if you would or would not like to participate in this study. My goal is to conduct your conference this week, so that you will have my oral feedback, in addition to my written feedback, as you revise for you final draft of Project One.

If you have any questions, please do not hesitate to contact me.

Sincerely,
Laura Samuels

Appendix B

Informed Consent Form for Research[*]
(Signed by All Student Participants)

North Carolina State University
INFORMED CONSENT FORM for RESEARCH

The Effectiveness of Web Conferencing Technology in Student-Teacher Conferencing in the Writing Classroom: A Study of First-Year Student Writers

Principal Investigator: Laura E. Samuels   Faculty Sponsor: Dr. Chris M. Anson

We are asking you to participate in a research study. The purpose of this study is explore the extent to which a student-teacher writing conference can be replicated through the use of Web conferencing technology.

INFORMATION
As a part of your ENG 101 course, you will conduct one out-of-class writing conference with your instructor. If you agree to participate in this study, you will be asked to engage in an out-of-class writing conference with the instructor conducted online via Web conferencing software and technology. If you agree to participate in this study, you will come to a designated location at a time decided on between you and your instructor. At this time, you will be taught the basics of using Web conferencing software (including, but not limited to, a microphone and Web camera). For a period of 20-30 minutes, you will engage in a writing conference with your instructor to discuss the draft that you have written for one of your five major projects. The questions and conversation that occur during this conference will be similar to those that occur in a face-to-face writing conference. At the end of the conference, you will be debriefed and asked a series of questions about your experiences with the online Web writing conference. Both the online Web conference and your interview will be recorded for research purposes. The online Web conference will be recorded through the use of screen recording software and the post-conference interview will be recorded with an audio recording device. The total time expected for the Web conference and the post-conference interview will be one hour.

RISKS
There are no direct risks to the subject with the exception of normal apprehension associated with an out-of-class conference with a writing instructor.

BENEFITS
No direct benefits to the subject are expected with the exception of normal benefits associated with an out-of-class conference with a writing instructor.

CONFIDENTIALITY
Throughout the Web conference, interview, thesis, and defense, the subject will only be identified by a first-name pseudonym. The subject's real name or any reference to the final grade the subject received on the project, previous and subsequent projects, or final course grade will not be discussed. During the thesis defense and, if possible, in the actual thesis, sample excerpts from the Web conference may be shown to demostrate the effectiveness (or lackthereof) of the Web conference. It is possible that an excerpt from the Web conference could contain a video recording (obtained through a Web camera) of your image or an audio recording of your voice. No other identifying information will be made available. All raw data obtained during the Web conference and interview will be kept strictly confidential.

---

[*] Approved by the N.C. State Institutional Review Board for the Protection of Human Subjects in Research on December 5, 2005.

COMPENSATION

You will not receive compensation other than the normal class assignment percentage for completing an out-of-class conference with the instructor. Other ways to earn the same amount of credit are to have a face-to-face conference with the instructor in her office.

CONTACT

If you have questions at any time about the study or the procedures, you may contact the researcher, Laura Samuels, at Tompkins 228, or 919/621-6086; laura.samuels@ncsu.edu or the faculty sponsor Dr. Chris M. Anson, at Tompkins 131 B, or 919/513-4080; chris_anson@ncsu.edu. If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Dr. Matthew Zingraff, Chair of the NCSU IRB for the Use of Human Subjects in Research Committee, Box 7514, NCSU Campus (919/513-1834) or Mr. Matthew Ronning, Assistant Vice Chancellor, Research Administration, Box 7514, NCSU Campus (919/513-2148)

PARTICIPATION

Your participation in this study is voluntary; you may decline to participate without penalty. If you decide to participate, you may withdraw from the study at any time without penalty and without loss of benefits to which you are otherwise entitled. If you withdraw from the study before data collection is completed your data will be returned to you or destroyed at your request.

CONSENT

"I have read and understand the above information. I have received a copy of this form. I agree to participate in this study with the understanding that I may withdraw at any time."

Subject's signature_____   **Date** _____

Investigator's signature_____   **Date** _____

Appendix C

Interview Questions

1. Before today's conference, what has been your experience with using Web conferencing hardware/software such as Web cameras, instant messaging programs, remote assistance, or microphones?

2. Do you generally feel comfortable with using computer software for communication?

3. Do you generally feel comfortable revising previous drafts of papers on the computer?

4. Before today's conference, how many face-to-face conferences have you had with university instructors?

5. Have any of these conferences been about papers that you were writing for your courses? If not, what were the general topics for these previous face-to-face conferences?

6. How did today's online conference relate to your previous face-to-face conferences? Speak generally about your experiences.

7. In your opinion, how do you feel that today's Web conference went?

8. Did you find using the technology a barrier or an asset to the student-teacher conference?

9. Were you able to get all of the feedback that you wanted/needed from this conference?

10. Do you feel that this Web conference did a successful job at replicating a face-to-face conference?

11. For future student-teacher conferences, would you prefer a face-to-face conference or a Web conference? Why?

12. If the technology were readily available, would you participate in student-teacher Web conference from your home? What about Web conferences with other classmates? Do you think these conferences would be useful?

13. If available, would you consider recording the proceedings of a Web conference and reviewing it later as you continued to revise subsequent drafts of your papers?

14. In your opinion, what are the biggest challenges to participating in a Web conference?

15. What would you consider to be the biggest benefits of the Web conference?

16. Did you find that you were more or less anxious participating in a Web conference as opposed to a face-to-face conference? What do you think caused the increase or decrease in anxiety?

17. Do you have any additional comments about your experience today regarding your Web conference?

Appendix D

Interview Transcript with Student 1 ("Shannon")
February 1, 2006

Interviewer: OK, so before our conference today, what has been your experience with using Web conferencing technology…like, a Webcam, microphone, IM, remote assistance, etc.?

Shannon: Oh, I've used IM a ton…never a Webcam or mic…and I've only seen other people do remote assistance and stuff.

Interviewer: OK, so you've used IM a lot? Do you generally feel comfortable using the computer for communication…like, e-mail or IM?

Shannon: Oh, yes…I use IM and e-mail everyday….

Interviewer: OK, so…think about when you're revising a paper, after, like, you've written a first draft…do you generally do your revising on the computer or with printouts?

Shannon: Umm…I always usually write out the first draft, put it on the computer, and then revise on the screen. Copy and pasting and such….

Interviewer: OK, so tell me, before today, how many conferences with instructors have you had, regardless of writing or anything?

Shannon: At the college level probably two or three…[*thinking aloud*]…three.

Interviewer: And what types of conferences?

Shannon: One was defending a grade and then the other was two conferences with my English teacher about bettering my paper…kind of like this.

Interviewer: So what class was that for…the English paper one.

Shannon: [English] 263.

Interviewer: So you have had another English class here?

Shannon: It was an accident…[*Laughing.*]

Interviewer: Oh really…how did that happen?

Shannon: Umm.. I came in [to the university] and it [English 263] didn't have any pre-reqs and I couldn't get into [English] 101 because you know everybody's trying to get into 101, so I went ahead and took it [English 263] and it was just like the grace of God that I got a C. Because for my major you can't even have a C-.

Interviewer: Geez…What's your major?

Shannon: MSL—Middle School—Social Studies and Language Arts.

Interviewer: OK, so you've already taken that and now you're taking 101?

Shannon: And I'm really hoping that will let me do better in this course… I'm hoping…. [*Laughing.*]

Interviewer: Umm…well that's really funny…that will be interesting…I'll check back with you at the end of the semester and I'd like to see how you feel about the organization [taking English 263 before English 101]. OK, the one that was about your writing…you said the 263 one that was about writing…umm…how did you feel that this [Web Conference], generally, in comparison in relation to face-to-face….

Shannon: If you could do this at home, I would like it. A lot. Actually, it takes off some of that nervousness. Like right now, I'm like, "Oh man I've got to watch my words"…but when it's on there you're like, "Oh you could be at home in your pajamas"…it's cool.

Interviewer: Right. So you definitely like that [the Web Conference]. Did you feel you were better able to ask questions that way? Or this way [through a face-to-face conference]?

Shannon: It's easier getting my thoughts together better through the Web cam.

Interviewer: Really?

Shannon: Yeah…

Interviewer: OK, how do you feel, in your opinion, that today's conference went? Do you feel like it was successful? (You can be truthful…)

Shannon: [*Laughing.*] It went really well…I got excellent advice on my paper.

Interviewer: OK, great…so…did you feel the technology was a barrier or an asset to the conference today?

Shannon: An asset.

Interviewer: An asset. OK, Why?

Shannon: Because it would have been weird for you to just have control of my computer, but I couldn't hear or vice versa or I couldn't see…it aided in the full effect of what you were trying to do.

Interviewer: OK, umm…Do you feel like you got all the feedback you needed or wanted from the conference?

Shannon: Yeah…and more.

Interviewer: And more? Good, good; OK, umm do you feel that it did…think about your past conferences…do you feel that this is close to replicating that or how do you feel about the two of those when you compare them?

Shannon: I think it was still like a one-on-one aspect, but it was just, of course, way more technology based…I don't know about that intro/extro…all that crap [*Laughing.*], but it was the same…you were trying to get the same accomplished and you did…of course.

Interviewer: You felt like the same was accomplished?…Cool…OK so in the future, I think you said this already, would you prefer a face-to-face or Web conference?

Shannon: WEB…[*Laughing.*] definitely Web!

Interviewer: And you feel like you could get the same information?

Shannon: And I think, actually, that this would be better for teachers…because you wouldn't have to stay here [on campus] or something…you could go home and say, "OK, this is when I'll be on the Web…da da da da da [indicating time]…it would be a lot better actually.

Interviewer: Yeah that's one of the reason's I'm sorta looking into it. Thinking about like distance-education-wise. Like if you taught a class all online; how could you get the face to face aspect of it?

Shannon: Right.

Interviewer: OK, so if it was readily available, you would then participate from home?

Shannon: Mmmhmm.

Interviewer: OK, if you didn't have to buy a Web cam, like you just had it, if it was available for you, would you have conferences with other students? Like if it was a teacher requirement that you talk to other students about your papers through this. Would you be willing to do that?

Shannon: Oh, just like we did peer review?

Interviewer: Yeah…like peer review. Do you think that would help the peer review process?

Shannon: Yeah, cause then the students, especially, would be a lot more down to earth and willing [to be relaxed]…you know…you wouldn't get off topic, but it would be easier….

Interviewer: Do you think you could stay on topic?

Shannon: Yeah…I'm really…[*Laughing.*] driven to do it….so yeah.

Interviewer: So it would probably depend on the student? OK, like today, what I did was record it [the Web Conference] just so I can go back and look at it later to analyze the actual conference…do you think that it would be helpful to record all the time or should it be like an IM where it just disappears…sort of like a real face-to-face…

Shannon: Record them...just so you could know how to make it better…or umm…because different things happen in all the conferences, so you could find something new each time.

Interviewer: So you could look at your performance and see what kind of questions you could ask the instructor the next time or the instructor should have asked you?

Shannon: Right.

Interviewer: What do you think, in your opinion, are the biggest challenges to having a Web conference?

Shannon: Like you said, if it wasn't…umm…given to you then the equipment could be pricey.

Interviewer: Yeah, I think the Web cam itself was $50, so it is a little bit pricey, so you think just like the purchase…but [do] you think, like, if you could check one out from the library, that would be OK?

Shannon: Right.

Interviewer: OK, what do you consider to be the biggest benefit from the conference?

Shannon: Of course, the feedback on the paper and just like knowing and stuff.

Interviewer: OK, just the feedback, you felt like it was very helpful?

Shannon: Yeah, we got a lot accomplished.

Interviewer: OK, did you find that you were more or less anxious participating in a Web conference….

Shannon: LESS!…

Interviewer: LESS? Even before you came today?

Shannon: Yeah, cause I didn't know to expect. I just figured whatever….

Interviewer: So, just whatever. OK…that's cool. OK, so [do] you think the decrease was from the space [the physical distance from the instructor] or whatever?

Shannon: Yeah, I don't know what it is, you can get your thoughts together more. You know like you have your own personal space, without them seeing you there…you can do whatever..

Interviewer: OK, I see what you're saying…you could step away from it if you had to?

Shannon: Step away…do this…do that…write over here…

Interviewer: OK, is that what you were doing? [Referring to when the student was writing on the desk during the conference.] Were you taking notes?

Shannon: I was taking notes on what you were saying…So I could remember…

Interviewer: So you were just writing things down?

Shannon: See like in a real conference, I wouldn't be up here [*Mimicking writing notes on her notebook.*] while my teacher was talking.

Interviewer: You don't think you would?

Shannon: Right…No, I've definitely never taken notes before. I've always just felt like, I just have to say, "yes m'aam…oh yes"…that's how I feel when it's face-to-face. Yeah, that was like the first time I took notes.

Interviewer: Wow…OK…umm…..

Shannon: So you changed me! [*Laughing.*]

Interviewer: Umm…do you have any additional comments, anything that you haven't mentioned that you'd like to mention?

Shannon: Mmmm…No…it's just, you know, an interesting thing and I'm glad to be a part of it.

Interviewer: OK, thanks for your help.

Interview Transcript with Student 2 ("Mandy")
February 2, 2006

Interviewer: I just have a couple questions to ask you. What has been your experience with using like IM, Webcams, or anything like that?

Mandy: I've never used a Webcam.

Interviewer: Have you used IM? Like, AIM, Messenger…?

Mandy: I've used IM, yes…well, not really sure which one…I've got a Buddy List. [*Laughing.*]

Interviewer: OK, that's AIM; Good deal…umm, had you used a microphone on the computer?

Mandy: No…I'm very computer illiterate….[*Laughing.*]

Interviewer: OK, so you see yourself as computer illiterate…my next question is, do you generally feel comfortable using computer software for communication…so not necessarily for WebCam stuff yet…do you typically use e-mail?

Mandy: I have...I use e-mail.

Interviewer: And then you said IM as well; Umm…when you're revising your papers on your own, do you typically revise on the computer screen or are you printing them out and making comments?

Mandy: Umm…I like to print them out because I focus better. If I look at the computer screen, I want to do something else or I just lose focus…I'm better if I just sit down and look at it.

Interviewer: OK…you focus better with a print out. OK, how many face-to-face conferences have you had with just instructors in general, like meeting with instructors face-to-face?

Mandy: Not many…not unless, I just had a quick question and then I'd just ask them.

Interviewer: OK, had you met like in high school with any instructors about writing then…maybe either in class or out of class.

Mandy: Just kind of in class…like they would come by and see what was kind of going on and stuff like that and they would read your paper and you could ask questions, but we didn't really have like individual conferences.

Interviewer: OK, so it had been like what I had done in class that day…to see…where I just walked around to see where you were?

Mandy: I had one teacher who would read out loud your paper to the class and he would just like kill it…kill your work.

Interviewer: Really? So he would read it out loud and then…?

Mandy: He would read a good one, one that he thought was good…he was just really different.

Interviewer: Wow…so that was sort of…I'm sure that was really….

Mandy: And, I mean, we were saying, " God, don't let him read my paper!" [*Laughing***.**]…cause he would just kill it…I mean we had AP English III…and towards the end he started making his comments nicer….

Interviewer: Geez…OK, …

Mandy: Yeah and you'd want to make sure you always wrote the right thing, so he wouldn't slam your paper! [*Laughing.*]

Interviewer: OK, so any of the conferences that you've had have just been in class…some about writing…but for the most part, just quick questions. OK, now this might be a little hard to do, but thinking about sort of your interactions with a professor or a teacher in an in-class setting or when you just walked by real quick…how did this relate?…if you can, think that way….

Mandy: Well, this helped because just knowing that you were going to grade my paper …it helped just to have you give me comments instead of…you know, if you wrote something down on my paper, I might not exactly understand what you were trying to say, whereas face-to-face [on the computer] you can explain it to me.

Interviewer: OK, so you really liked the conversational aspect of it. Now…do you think you got the same face-to-face [on the computer] comments through the technology as you would get sitting here talking like this right now?

Mandy: Umm…Kinda…I guess….

Interviewer: It's probably a little hard to imagine…so just in your opinion, how do you feel that today's Web conference went; do you feel happy with it?

Mandy: I think it went good…I was a little nervous at first, but I think it was good. I know it definitely helped me and I didn't write things down on there [*Pointing to the Whiteboard screen.*]…but I wrote it on my own paper and it helped me because at the same time, I could see what we were talking about and what I needed to do and there's other stuff that I wouldn't have really noticed, but it helps to have it right there in front of you.

Interviewer: OK, umm…so did you find the technology aspect of it, like the Webcam, did you find that a barrier to us communicating or an asset…?

Mandy: I think it was OK…sometimes it [the sound from the microphone] was broken up…other than that I think it was OK.

Interviewer: So there were a few issues with you hearing me….

Mandy: Mmm…hmm.

Interviewer: OK, let's see…do you think you got all the feedback on your paper that you need?

Mandy: I think so. 'Cause it's like when we do peer review, it's nice to have somebody else's comments …but you know they're not exactly the teacher and they don't know what exactly you're looking for.

Interviewer: Right…it is…that's a difficult issue for every student who takes ENG 101…

Mandy: Yeah, I never did that [peer review] in high school.

Interviewer: OK, umm…do you feel that this Web conference did a successful job at replicating a face-to-face? Like, by a face-to-face, I mean just us talking …like if you were to bring a paper up here [to the instructor's office] and we would just sit down and talk about it…do you feel that what we did on the computer was similar to that or different…I mean would you get the same result out of it, is what I'm asking…?

Mandy: Probably…I guess…I don't know…I think I got a lot of good information…I'm happier about my paper now.

Interviewer: I'll be interested to sort of check in with you at the end of the semester and see how you feel after we've talked in person about a different paper…just your impression of that. Umm…if you had a choice and you had an

instructor who said…you can either meet with me on a Web conference, or come to my office and meet with me face-to-face…and you had the technology readily available, like already set up to your computer, which would you prefer do?

Mandy: I think it would depend on the professor…if I didn't feel as comfortable with the professor, I'd prefer a Web cam, but you know if I could sit down and have a friendly conversation and feel like I was equal, or not exactly equal on their level, but not so far inferior below them…I'd think I'd prefer a face-to-face. 'Cause you know some professors make you feel like, "Oh…I'm a professor…I'm a doctor…" [*Laughing.*]

Interviewer: So, it would just sort of depend on how you felt your interaction with your professor would go….

Mandy: Mmm…hmm….

Interviewer: Like, if you felt it was more…like if you felt, more removed from the professor, you would prefer the Web conference as a opposed to…

Mandy: Yeah…[as opposed to] talking to them face to face.

Interviewer: OK, umm…if the technology was readily available, again like if you just had it, would you have one [a Web conference] from your home?

Mandy: Probably…like that would be nice, you know, if the teacher wasn't in the office and you could be like, "Hey, I need to talk to you on the Web cam…" 'Cause like you know with e-mail and stuff…it would be easier to be able talk to somebody.

Interviewer: Yeah; so just sort of the real-time aspect of it?

Mandy: Yeah….

Interviewer: Uh… if you were asked to do it with other classmates, like with peer review outside the class, would you feel comfortable with that?

Mandy: Probably not.

Interviewer: Probably not…OK, why not?

Mandy: Umm…it would just like be weird...it would just be weird like sitting there doing peer review. I don't know…just because you'd be like what am I supposed to say to them…I'd feel weird talking to them about their paper to their face [on the computer].

Interviewer: OK, so you would recognize that they are actually there and feel weird? …

Mandy: Yeah…[*Laughing.*] In class, you can just hand them back their paper and leave…you don't have to deal with their reactions…like, "Why did you say that…?" [*Laughing.*]

Interviewer: [*Laughing.*] So you don't want to have to back up your comments? Umm…so would you say that then part of that would be that you wouldn't have someone to direct the conference, you'd feel more comfortable with someone like an instructor directing it…?

Mandy: Yeah…well probably talking to them [about their paper] on there, [*Motioning to the computer screen.*] would be easier on there, instead of face to face.

Interviewer: OK, so you would rather do it on a Web conference as a opposed to face-to-face?

Mandy: Mmm…hmm.

Interviewer: OK..so, again, just the approachableness compared to the other person. OK…umm…what I did today was record it so that I could look at it again later…would you, if you were asked to do this with a professor at home, would you consider recording it just for your own purposes or…?

Mandy: I'd like to record it for my own purposes…that way I would know if I got confused or forgot something, I could look back at it.

Interviewer: OK…and it would probably help make it seem more like a conversation where you didn't feel like you'd have to take down like every note….

Mandy: Mmhmm…

Interviewer: OK, in your opinion, what do you think was the biggest challenge to participating today?

Mandy: Mmm...just thinking about it before I got here…and being nervous!

Interviewer: So, the apprehension is really what sort of freaked you out at first. OK, so what would you consider now to be the biggest benefit of it?

Mandy: Umm…actually being able to hear your comments and being able to look at it at the same time.

Interviewer: OK, so you really liked just being able to look at the two side by side; OK so, let's see…I'm gonna ask this question two ways, before you came today and didn't have any idea what was going on, do you think you were more anxious coming to talk me as opposed as if you were just coming by to talk to me after class?

Mandy: More anxious….

Interviewer: OK, now that you've done it…and you know what it's like…would you say that you'd still be anxious?

Mandy: I think less anxious…it wasn't as bad as I thought it could be….

Interviewer: Right…so would you think, say for example, I introduced this in another class…I'm not going to…but if I did….[and I say,] "I want to have Web conferences with you guys and I know you don't know what it is, so what I'm gonna show you is just a sample snippet of a conference that I had with another student…" and they sort of saw what went on…do you think that would help?

Mandy: I think it would help them because they would see that it wasn't really formal…more informal and we were just talking.

Interviewer: OK…umm…finally, do you have just any additional comments…anything you didn't mention that you'd like to?

Mandy: I don't think so.

Interviewer: OK, thanks.

Appendix F

Interview Transcript with Student 3 ("Wes")
February 6, 2006

Interviewer: OK, umm…really just, you know, a couple questions I have to ask you. First of all, before today's conference, other than what we had a few minutes ago [the Web conference], what has been your experience using Web cams or microphones or anything along those lines?

Wes: Umm…pretty seldom…not much at all.

Interviewer: OK, so have you had any experience with them?

Wes: Umm…a little bit, using like microphones and stuff…but never Webcams.

Interviewer: OK, so some microphone experience. Umm…do you generally feel comfortable using the computer for communication purposes...

Wes: Yes…Definitely.

Interviewer: Like, e-mail, IM and stuff like that. Umm...do you feel comfortable when you are revising your own drafts for your papers…do you usually revise on the computer or do you print out and make notes?

Wes: Uhh…usually on the computer…I guess I just kind of got used to it and it kind of seems easier, like changing things and moving them around.

Interviewer: OK…yeah, I think that's something that more and more people are beginning to use as they revise.

Wes: There was like a big push for that when I was in middle school…we had like a class on copying and pasting.

Interviewer: Oh, really?

Wes: Yeah, there was like a huge push just for like the revisionary aspects of using the computer of like copy and paste and insert and doing this and that.

Interviewer: And that was in middle school?

Wes: Yup

Interviewer: What years were you in middle school?

Wes: Oh man…let's see…[*Thinking.*] I'm a freshman here [in 2006] so…4 years ago I was still in high school…which was 2001…so I guess like 1999, I guess.

Interviewer: So, basically, like the late 1990s, basically. That's fascinating… Umm…let's see…so before today's conference, how many face-to-face conferences have you had with an instructor, like, just what we're doing now…like when you come to an instructor's office?

Wes: Uhh…like just in college?

Interviewer: Yeah, pretty much, just in college.

Wes: Mmm…maybe only like one or two.

Interviewer: What classes were those?

Wes: I think, uhh…one was Current Social Problems and the other was Modern American History.

Interviewer: OK, so no English classes…just like history and like philosophy or sociology?

Wes: Yeah, sociology.

Interviewer: Ok, for any of those two courses, had you talked about writing for a class?

Wes: Uh…yes…the...uh…we had to write a big research paper for the history and he was really big on writing about history and he had a lot of really good guidelines about how to do that.

Interviewer: OK, so you have had some experience talking with instructors about a paper…and when you think back to some of those conferences, talking to an instructor about your paper…Umm…generally, how do you feel about the difference between those two, when you think about the feedback you got and those type of things?

Wes: Uhh…it [the technology] seemed a little alienating, but it seems like something you could get used to…

Interviewer: So you feel like you could…after you had done it a couple of times…it is something you could get used to after a couple of times?

Wes: I like…I think being able to do it from like home would be far more convenient…that would be the best…the fact that you could do it kind of more anytime. That would make up for the fact that it could be a bit alienating.

Interviewer: And [you would] be in a situation or environment that you're used to…not in your instructor's office that you've never been to before…Umm...OK, let's see here, in your opinion, how do you feel today's conference went?

Wes: Umm…good…in my opinion…the ability to actually go through the paper and kind of talk about it like word for word…

Interviewer: So you enjoyed that aspect of it…Sort of going though it in a really intensive manner, I guess….

Wes: Yeah….

Interviewer: OK, umm…when you think back in comparison to the regular face-to-face conferences that you've had, did you think that the technology was more of a barrier or an asset to the conference…like with respect to learning and general academic needs?

Wes: I think it kind of goes both ways…there were still a couple of problems in places where it [the sound] would stutter and that would make it hard to understand…but then I think the fact that you could kind of see that we were both looking at the same paper at the same time helps out.

Interviewer: OK, so just sort of being able to you know talk about it and look at it together?

Wes: Yeah.

Interviewer: Umm...do you think that you got all the feedback that you wanted or needed?

Wes: Yeah, I think so.

Interviewer: OK, umm…do you think that it did a successful, and by successful not 100%, but like 70-80% successful, job of replicating a face-to-face conference?

Wes: Yeah, I think so.

Interviewer: Umm…if you had to have a future student-teacher conference, and you had a choice between a Web conference or a face-to-face conference, and

the technology was readily available…as in you already had it hooked up to your computer and you didn't have to worry about any of that…would you prefer a face-to-face or the Web conference?

Wes: Uh…I think maybe still the face-to-face.

Interviewer: OK, what would be your reasoning for that?

Wes: Mainly, just because it's more familiar still…I think if I actually used a Webcam on my own more often it would make a difference.

Interviewer: Like if you talked to friends and stuff at home, then you'd feel more comfortable…?

Wes: Yeah.

Interviewer: OK, umm…let's see here, again, if the technology was readily available…did you say you would participate in one from home?

Wes: Yeah, I think it would be a good supplement, but I don't think it really replaces face-to-face.

Interviewer: Right, and you say that just because of the general space difference, like being physically away or just the general technology or…?

Wes: I think the physical part of it…the technology, to me, seems to work pretty well…but I think that physical aspect is important.

Interviewer: So just being able to actually look at each other…

Wes: Yeah, it's kind of disjointed [looking into the camera and then to your paper on the screen and vice-versa].

Interviewer: Umm…let's see here…if you were asked to participate in another Web conference with another student about like peer review or something like that…how would you feel about something like that?

Wes: Umm…I think it would be fine…Yeah.

Interviewer: OK, would you do that from home as well?

Wes: Uh…yeah.

Interviewer: Do you think there would be any issues or problems trying to stay on topic or talk about your paper in general?

Wes: Not to my knowledge. I think that kind of the format of it kind of leads it to be not too formal, so it would be easy to focus on the paper like that.

Interviewer: So you think it would be definitely…

Wes: Yeah I think it would be pretty easy to stay on topic and things…

Interviewer: OK, umm…what I did today was record it so that I can go back later and look at it for research purposes, if you were to have a conference from home or with a student regardless of whom and you had the ability to record it, would you consider doing that or would you rather it just sort of disappear like an IM.

Wes: Umm…I could see where it would kind of have its advantage to be able to review it later, but at the same time I kind of umm…I don't know…I think maybe delete it.

Interviewer: Yeah…there is something scary about all of you movements and sayings being recorded.

Wes: Yeah, kind of 1984-ish [*Laughing.*]; Remembered forever….

Interviewer: [*Laughing.*] Yeah….so it would just sort of depend on what you were doing…

Wes: If it was a major kind of important thing, I think recording it for reviewing purposes would be better…but if was more kind of informal going through it kind of like a chat I don't think it would really need to be recorded.

Interviewer: OK, umm…just in your opinion, what do you think are the biggest challenges to participating in a Web conference?

Wes: Uh...just kind of getting used to it, for me personally, because I've never really done any kind of Web conferencing before.

Interviewer: Mmmhmm…OK, and what about the biggest benefits?

Wes: Uh, probably just being able to go through the same page at the same time and I could see where it could be convenient in a lot of situations.

Interviewer: OK, so convenience would be a selling point for you. Umm…did you feel when you think about how you felt before you walked in here today, before you knew what the Web conference was, did you feel more anxious

coming to do this as you would just to talk about your paper in general or did you feel less anxious?

Wes: Uhh…maybe a little more anxious…but not a whole lot.

Interviewer: And just, what would be your reasoning for that?
Wes: I guess…it's just kind of a new thing…a new experience.

Interviewer: OK, umm…do you think that if you continued to have more and more conferences in your personal or academic life, do you think any of that anxiety would go away?

Wes: Yeah, I think so.

Interviewer: And, just last question, do you have any additional comments that you'd like to add about the experience?

Wes: Uhh…No, not really—not off the top of my head.

Interviewer: OK, thanks for your help.