

ABSTRACT

Title of Document: MEETING THE NEEDS OF THE NONTRADITIONAL STUDENT: A STUDY OF THE EFFECTIVENESS OF SYNCHRONOUS ONLINE WRITING CENTER TUTORIALS

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In the fall of 2007, 3.9 million students took at least one online course, reflecting an online education growth rate of 12.9 percent. Many online students are nontraditional, possessing one or more of the following characteristics: delayed enrollment, part time attendance, full time worker, financially independent as related to financial aid, dependents other than a spouse, single parent, a GED or did not finish high school. While these students bring diversity and life experience to the classroom, they are often ill-prepared for college writing. Though they need help, hectic schedules make it difficult to meet with a writing consultant. This study investigates whether synchronous writing center tutorials can effectively address this client population's needs.

Currently, there is a dearth of scholarship relating to online writing tutorials, particularly synchronous tutorials. This two-year study of 189 face-to-face clients and 90 online clients employs quantitative and qualitative research to determine (1) the demographic profile of online users, (2) reasons clients meet online, (3) help sought

online, (4) online client preparation, (5) client perceptions of online sessions, and (6) advantages and disadvantages of online sessions. Data were culled from a client questionnaire, online session logs, and consultant and client interviews.

Statistically significant differences in client demographics between face-to-face and online users were found in age, ethnicity, and gender: online clients are younger, are more likely to be white, and are more likely to be male. Clients meet online primarily for convenience; however, there is no correlation between distance from campus and online client usage. There were no significant differences in client preparation. Spelling was the only statistically significant category in help sought: online clients seek more spelling help than their face-to-face counterparts. Face-to-face and online clients both viewed their sessions as successful with no statistically significant difference between the groups. Over one-third of clients reported technical problems during their session, and some clients expressed a preference for the emphatic cues found in face-to-face consultations. Advantages of online sessions included assistance with word processing features, the ability to make revisions to the working document, and the ability to record the session.

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TUTORIALS

By

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INTRODUCTION

In 2008, the National Center for Educational Statistics (NCES) published the results of its fourth national survey on distance education at degree-granting post-secondary institutions (Parsad. &Tice, 2008). The survey defined distance education as “a formal education process in which the student and instructor are not in the same place” (p. 1). Instructional methods could be synchronous or asynchronous and could include any or all of the following communication channels: video, audio, computer technologies, and correspondence courses such as those that employ CD ROMs. The survey found that in the academic year 2006-2007 “two-thirds (66 percent) of 2-year and 4-year Title IV degree-granting postsecondary institutions reported offering online, hybrid/blended online, or other distance education courses” (p. 2). In 2007, estimated enrollments in distance education courses at two-year and four-year accredited college institutions had topped 12 million (NCES, 2008).

In November 2008, the Sloan Consortium published, *Staying the Course: Online Education in the United States*. This study produced survey statistics relating to enrollments in online courses (defined as more than 80% of instruction occurring through synchronous or asynchronous computer mediated communication). The study confirmed what most administrators and faculty members already suspected: the growth of online higher education continues to be astounding. 3.9 million students took at least one online course in the fall of 2007, reflecting a growth in online education enrollments of 12.9 percent as compared to a modest 1.2 percent increase in the overall higher education student population (Allen & Seaman, 2008).

This surge in online enrollments mirrors a similar surge in adult nontraditional student enrollments. Nontraditional students are defined by NCES as students possessing one or more of the following characteristics:

- Delayed postsecondary enrollment;
- Part time attendance in a postsecondary institution;
- Full-time work (35 hours or more per week) while enrolled;
- Independent financially as related to financial aid;
- Dependents other than self and spouse;
- Dependent children and single parenthood;
- High school completed with a GED;
- High school not completed. (Carr, 2003)

The first wave of nontraditional students is generally acknowledged as having occurred in the 1970s and is attributed to the advent of open admissions which stemmed from the Civil Rights Act of 1964 and the turbulence of the 1960s.

Mina Shaughnessy, author of *Errors and Expectations*, states, “in the sixties and largely in response to the protests of that decade, many four-year colleges began admitting students who were not by traditional standards ready for college” (1977, p. 1). At City University of New York (CUNY), where Shaughnessy was the Director of Basic Writing, university enrollment jumped from 174,000 in 1969 to 266, 000 in 1975 (Shaughnessy, 1977). This student population was more diverse than ever before: it included “the children of the lettered and the illiterate, the blue-collared, the white-collared, and the unemployed . . . (Shaughnessy, p. 2). The advent of a diverse student body fostered by open admissions along with the evolution of an increasingly white

collar society has led to the steady and continued growth in nontraditional student enrollments at postsecondary degree-granting two-year and four-year institutions.

The demographics of nontraditional students vary substantially from those of the traditionally aged student. Nontraditional students typically enter or return to college after having faced a significant change or transition in their personal lives (Brickell, 1999; Haynes-Burton, 2003). The motivating factors behind their decision to begin or continue their college education are primarily financial and occupational (Brickell, 1999). Women also significantly outnumber men among nontraditional students. Nontraditional students typically work full-time and struggle to balance competing priorities: thus, convenience is a significant factor in the nontraditional student's selection of a college or university. Haynes-Barton in 2003 observed that nontraditional students are often the victims of "corporate mergers, lay-offs, hiring freezes, staff contractions and realignments, consolidations, and attrition" (p. 217). These economic problems are perhaps even more prevalent in 2010 than they were in 2003 and may explain, in part, the growth in nontraditional, adult, and distance education enrollments.

The NCES links nontraditional students to growth in online enrollments: "moderately or highly nontraditional students were more likely than either traditional students or minimally nontraditional students both to participate in distance education and to be in programs available entirely through distance education" ("Digest," p.10). A 2008 NCES study projects a rise of 10 percent in enrollments of people under 25, a rise of 19 percent in enrollments of people 25 and over and the recently released NCES 2009 study of graduate and first-professional enrollments further predicts that "enrollment increases in graduate and first-professional programs will persist, with graduate

enrollment exceeding 2.7 million and first-professional enrollment reaching 422,000 in 2018” (Planty et al, 2009, p. 29). The 2009 Sloan publication, *Staying the Course: Online Education in the United States, 2008*, confirms the NCES predictions and adds that there is widespread agreement among institutions of higher education that rising fuel costs will also lead to an increase in online courses, and high unemployment will lead to increases in nontraditional student enrollments.

Whether the rise in nontraditional student enrollments led to growth in distance and online postsecondary education course offerings, or whether the growth of online courses and distance education course offerings led to the growth of nontraditional student enrollments is a moot point to a university’s chief administrative officer: the only point that matters is that the significant increases in both online and nontraditional student enrollments have created a “rapidly expanding and highly competitive distance-education market” (Hobson, 1998, p. 491). Many colleges and universities are aggressively courting nontraditional students during these tough economic times. As Gene Maeroff, Director of the Hechinger Institute on Education and Media at Teachers College, Columbia has observed, “Unlike students of traditional age, they [nontraditional students] have money and are not dependent on loans or grants” (2003). They can be a “life preserver” for financially strapped colleges and universities with dwindling traditionally aged enrollments (Maroff, 2003).

Furthermore, nontraditional students bring diversity and a wealth of life experiences to the classroom. In a comprehensive study conducted across nine institutions, nontraditional students ranked higher than traditionally aged students in 14 out of 15 traits identified by faculty as desirable: class attendance, attentiveness in class,

class participation, contribution to class learning environment, motivation to learn, enjoyment of learning, completion of assignments, going beyond assignments, responsiveness to advice, self-reliance, intellectual capacity, quality of academic work, priority given to study over work, and priority given to study over social life. The only category in which traditional students surpassed nontraditional students was “priority given to studies over family duties” (Brickell, 1995, p. 26). With these traits, one would expect a high degree completion rate among nontraditional students; however, “compared with their traditional counterparts, nontraditional students seeking bachelor’s and associate’s degrees are less likely to attain their degree goal within 5 years and are more likely to leave postsecondary education” (Choy, 2002, p. 13). Some attribute the higher attrition rate to the additional obligations of older students, while others see it as directly linked to distance education as a mode of instruction (Carr, 2009). However, the availability and ease-of-access of student support services may also affect nontraditional student retention rates, particularly since nontraditional students are most in need of such services and are least likely to have access to them.

The Impact of Online Learning and Nontraditional Students on Writing Centers

An identified area of concern for many colleges and universities and “one of the sticking points about distance learning is the lack of student services for online students compared with those available for their face-to-face peers” (Santovec, 2005, p. 4). Such parity is particularly necessary given that many online learners are nontraditional students who may be less prepared for college than their traditionally aged counterparts who enter college immediately after high school graduation. Nontraditional students often have not written an academic paper for years or even decades. College and university

administrators are acutely aware of the need to provide support services for these students as are writing center scholars and directors. Muriel Harris, founding director of the Purdue OWL, recognizes the necessity “to find imaginative ways to serve the unique needs of this population” whose skills “may have gotten a bit rusty” (Harris, 1990, p. 24).

Shareen Grogan, Director of the Writing Centers at National University, a “geographically dispersed” institution serving nontraditional students many of whom have not “written a paper in 20 years” and are enrolled in online classes decided to supplement face-to-face consultations with synchronous online consultations. That decision, however, ultimately led to an administrative decision to eliminate the brick-and-mortar writing center and the face-to-face conferences it provided:

Our online presence was intended at the beginning to supplement onsite tutoring-for students who work only online (some out of state, some in the military in Iraq, for example), and to provide tutoring on the weekends. It was one more choice that students had. However, as more and more of NU’s classes were offered online (some only online), the administration decided that for the equity of service and for budgetary concerns, we would offer only online tutoring.

While Grogan ultimately supports the administration’s decision, her story is troubling in that the administration’s mandate seems to be a usurpation of the writing center director’s role.

Such unilateral decisions, often based on an economic analysis, have prompted writing center scholars to advocate a proactive approach to online services and conferencing. Harris has identified the use of technologies as an invitation to “sit at the

head of the table” (Childers, 2006; Cummins, 2000; Ede & Lunsford, 2000; Harris, 2002; Ryan & Zimmerelli, 2010). Harris and others argue that academia is not immune to economics and that funding will follow the needs and trends of society, trends that clearly include technology; therefore, it behooves writing center directors to embrace emerging technologies. Other scholars go even further, calling upon writing center directors to make more use of technology in order to “elevate the image of the writing center across the university by incorporating technology on as many levels as possible” (Stahlnecker, 1988, p. 2).

Some scholars worry, however, that too often writing center directors rush to adopt new technologies for technology’s sake rather than for the sake of the students they serve (Inman, 2004). Directors should determine whether there is a need for an online writing center presence, and, if there is a need, they should seek to create the best possible way of meeting that need using technology that is appropriate, given the demographics of the student population. The unique characteristics of nontraditional students have led to an increase in online services and online tutoring despite the continued skepticism of some administrators, particularly administrators at residential campuses (Neaderhiser & Wolfe, 2009). Still, even skeptics of online delivery, such as Ray Wallace, who decries the pressure placed on writing center directors to provide online services, recognize that writing center directors can “regain the leadership role. . . and be seen on campus as leaders in this area and not followers” by becoming familiar with and implementing new technologies appropriately (1998, p. 169).

Background of this Study

I am the director of a writing center that serves primarily nontraditional students enrolled in either a bachelor's degree completion program or in a graduate degree program. The center is located at a satellite campus in Stafford County, Virginia, approximately seven miles distant from the university's main campus in Fredericksburg, Virginia. The Fredericksburg campus offers a strong liberal arts program geared toward a traditionally aged, resident student population. In comparison, the Stafford campus has an older, more diverse student body and offers certificates, programs, and degrees aimed at working professionals. Located approximately sixty miles from Washington, D.C. and less than thirty miles from Quantico, Virginia, the Stafford campus attracts a significant number of federal workers, servicemen, women, and military personnel. In addition, local businesses and organizations, such as GEICO and Mary Washington Hospital, encourage their employees to attend classes and obtain degrees at this campus. Degrees offered include a Bachelor of Professional Studies (BPS), a Master of Business Administration (MBA), a Master of Education (M.Ed.), a Master of Science Information Systems (MSIS), and an accelerated dual degree: MBA and MSIS.

The university's 2007 report to the Board of Visitors defines the mission of the Stafford campus thus: "To support regional development, lifelong learning, and professional advancement through quality full-time and part-time educational programs" (Braymer, 2007, p. 6). Because convenience is paramount to adult students, most classes are offered at night or on weekends in a blended format; some courses are offered entirely online. BPS students and MBA students take accelerated classes over an eight-week term, while M.Ed. students follow a traditional sixteen-week term.

Students attending the Stafford campus are predominantly nontraditional. Seventy-six percent of students work full-time and an additional 15% work part-time. Most students (66%) commute directly from work to campus, arriving on campus shortly before class at 6:00 p.m. (Safferstone, 2005). This schedule substantially lessens the window of opportunity for face-to-face writing conferences. Most students want conferences on the same evening(s) that they attend class. Since classes start at 6:00 p.m., and end no earlier than 8:45 p.m., with some ending at 9:45 p.m., students want to leave campus directly after class; for the writing center, this means that the hours of 4:00 p.m. to 6:00 p.m. are extremely busy.

The change in 2007-2008 academic year from the traditional sixteen-week semester to an eight-week semester, for all but the M.Ed. students, had a dramatic impact on writing center usage. With midterms and finals taking place twice as often, the peak times at the writing center doubled. Though the writing center has always asked students to drop their papers off in advance of their conference through the center's Blackboard site, in order to maximize the number of students seen in the center, demand during peak times greatly exceeded time slots available during the 2006-2007 academic year.

Origin of Online Writing Center Consultations at the Stafford Campus

Given a limited budget and a desire to meet the needs of nontraditional students, a pilot study was launched to determine whether synchronous online conferences utilizing Voice-over-internet-protocol (VoIP), application sharing, and video – all in real-time – could be used to effectively supplement face-to-face conferences at the writing center. Though asynchronous e-mail tutoring was considered, it was not adopted for two reasons: (1) a concern that more students would submit papers than the center could serve, and (2)

a belief in the dialogic process employed during face-to-face consultations. Students at the Stafford campus tend to be highly motivated and exhibit many of the characteristics identified with nontraditional students, including high motivation, an ardent desire to learn, and responsiveness to advice (Brickell, 1995). It is likely that many, if not most, students would submit their papers for asynchronous e-mail consultations, particularly since doing so is convenient, far more convenient than making and keeping an appointment. Given the writing center's limited budget, it would not be possible to read and respond to all the submissions received via e-mail. Synchronous consultations, while not as convenient as asynchronous e-mail consultations, still save students time and are more convenient than conventional conferencing at a brick-and-mortar center. In addition, synchronous conferencing permits a dialogic exchange that rarely occurs in e-mail consultations (Spooner, 1994; Castner, 2000; Neaderhiser & Wolfe, 2009). If "the essence of the writing center method" is talking, keeping the dialogic exchange in the conference is paramount for the success of the conference (North, 1984, p. 75).

Importance of this Study

While the origin of this study stemmed from an observed need at the host institution, there is a profound need for scholarship related to online writing labs and learning centers. The Writing Center Research Project for 2003-2004 found that, of the institutions surveyed, "only 37 (16%) indicated that they had OWL [online writing lab] services available" (Griffin, Keller, Pandey, Perderson, & Skinner, 2005). In a 2005 study of 343 online writing labs/centers (OWLS), only 29% were fully interactive offering some type of online review, and of that 29% only 6% offered synchronous online tutoring (Mackiewicz, 2005). The newly released Writing Center Research

Project 2006 shows a modest increase in overall online services with “just over half” of the 498 writing centers responding to the survey reporting some type of online writing center; however, of those centers, only 115 (23%) reported some type of online consultations, a 6% decrease from the 2005 study. Of those writing centers reporting online consultations, “e-mail was far and away the most common technology used, comprising almost 90%” of such consultations (Neaderhiser & Wolfe, 2009, p. 59). The remaining 10% of online consultations was made up almost entirely of real-time text-based chat while “real-time voice technologies accounted for less than half of one percent of recorded consultations” (Neaderhiser & Wolfe, 2009, p. 59). Neaderhiser and Wolfe lament that “few writing centers are taking advantage of the newest consulting technologies. . . . fewer than 5% reported even experimenting with a technology that was not available when Shadle did his first survey of OWLs in 1997,” a finding that is especially troubling, given that asynchronous conferences “seem at odds with the collaborative, dialogic ethos of the face-to-face writing center consultation” (p. 61).

Given how few writing centers offer online consultations, it is hardly surprising that little research has been done related to OWLs, asynchronous, and synchronous consultations. What research has been done generally details OWLs that maintain web sites offering materials such as documents, handouts, streaming videos, and interactive tutorials. Most research related to online conferencing has been devoted to asynchronous e-mail consultations rather than synchronous tutorials. There are, however, some notable exceptions, among them Doug Enders’ reports on synchronous tutorials employing Microsoft’s NetMeeting (2000; 2001; 2005). More recently, Jo Ann Griffin’s 2008 dissertation comparing face-to-face consultations with synchronous tablet and

synchronous PC consultations has provided valuable insight into how tutors and tutees interact online. Neither study, however, provides information related to the demographics of online users.

When Sam Racine, Denise Dilworth, and Lee-Ann Kastman Breuch created the University of Minnesota's OWL serving "graduate, professional, and undergraduate students, as well as non-degree-seeking students interested in continuing education and life-long learning," they found that they knew little about their audience and the audience's needs (2000, p. 58). This, they note, is the case with online writing centers and audience demographics in general; "the silence from cyberspace has been pedagogically unnerving" (p. 60). And this lack of information is still the case, though widely accepted assumptions about online writing center clients abound. These assumptions posit that online clients are most likely to be distance education students, students who are physically challenged, students who want additional privacy, students who are unable to come to the center during traditional hours, and students who are highly apprehensive (Anderson-Inman, 1997; Beebe & Boneville, 2000; Brown, 2000; Carlson & Apperson-Williams 2000; Hall & Wolf, 2003; Kinkead, 1988; Mabrito, 2000; Mobrbacher, 2007). Without empirical evidence to support these assumptions, they remain just that: assumptions.

Another assumption widely accepted as a truism is that online consultations cannot capture the nuances of emphatic cues or the dialogic exchange of face-to-face conferences, and therefore, are generally an insufficient substitute for face-to-face conferences (Baker, 1994; Spooner, 1994; Childers, Jordan, & Upton, 1998; Wallace, 1998; Jackson, 2000; Sharon, Hara, & DeVoss, 2000; Mohr, 2000; Harris & Pemberton,

2001). Related to this is the widely accepted belief that the effective online conference should mirror as closely as possible the dynamics of a face-to-face conference; however, dissenting scholars note that the dynamics of an online tutorial may be very different from those of a face-to-face tutorial (Crump, 2000) since technological tools “promote certain behaviors while inhibiting others” (Blythe, 1977, p. 99). Frustrations can arise from “less than impressive attempts to mirror the face-to-face environment” (Kastman Breuch, 2005).

In one of the earliest commentaries on online tutoring, “Straddling the Virtual Fence,” Eric Hobson (1998) called for more research to determine such things as whether online clients reach the same competency as face-to-face students, whether online users have a unique demographic profile, and whether the dynamics of online conferencing are the same or different from face-to-face conferencing (1998). Similarly, Stuart Blythe enjoined online writing center directors and researchers to “gather meaningful data that will yield insights into how people interact with sophisticated technologies” (1998, p. 105). Over a decade later, the call for meaningful scholarship employing quantitative as well as qualitative research still has not been answered, nor has Abrenhoerster’s injunction that “future publications . . . be directed toward assessing *actual* results in terms of *actual* students” (2002, p. 5).

Study Rationale

This study takes on the challenges set by Eric Hobson, Stuart Blythe, and Eric Abrenhoerster in that it employs qualitative and quantitative research that presents *actual results* from *actual students* and provides significant data on synchronous conferencing, “the most complex and least understood form of OWL” (Hewett and Ehmann, 2004, p.

115). Face-to-face writing center clients and synchronous online writing center clients were surveyed over the course of two years to determine whether synchronous online writing consultations could prove effective in meeting the needs of nontraditional students. Though face-to-face and online clients are compared in this study to determine whether significant differences in the demographic characteristics exist between face-to-face and online clients, this study is not meant to promote one method or mode of conferencing over another. The face-to-face conference statistics presented here merely provide the norm against which online conferencing at the host institution can be measured.

Research Questions

The study seeks to answer the following questions:

1. What, if any, demographic trends can be observed in online users? Do writing centers gain clients by offering online consultations or do clients simply migrate from face-to-face conferences to online conferences? In “The Electronic Writing Tutor” (1988), Joyce Kinkead argues that online tutoring “taps an audience that might not ordinarily use the writing center because of time conflicts, distance problems, second language problems, or simply shyness” (p. 5). Is this actually the case?
2. Why do students choose to conference online? Is there, for example, a correlation between how far a student lives from campus and the likelihood of his or her choosing to consult online, as David Carlson and Eileen Apperson-Williams suggest? (2000). Are clients with children more likely to meet online than clients without children who are not hampered by childcare concerns?

3. Are there significant differences in the pre-conference preparation of face-to-face and online clients? Have face-to-face and online clients taken the same steps in preparing for their consultation or is one group more prepared than the other?
4. Do online writing center clients seek the same type of help that face-to-face clients seek? Several studies show that students come to the writing center, initially for help with grammar (North, 1982; Childers, Jordan, & Upton, 1998; Racine, Dilworth, & Kastman Breuch, 2000). Is this equally true of online users? Do clients seek to discuss different aspects of their work online than they do in the face-to-face conferences?
5. How effective do clients think their online sessions are? Do clients leave conferences thinking that writing skills as well as their paper have improved? How likely are clients to return for another session?
6. What advantages and disadvantages are inherent in an online session? Does file sharing, for example, change the dynamics of the session? Are writing center consultants more directive in online conferences than they would be in face-to-face conferences? Do clients review links to their recorded sessions, and if so, does this increase metacognition, as Eric Crump (2003) has suggested?

Dissertation Design

This brief introductory chapter is followed by a second chapter comprised of a literature review surveying writing center history and theory as well as current face-to-face, asynchronous online, and synchronous online practices. An understanding of writing centers' pedagogy, andragogy, hegemony, methodologies, and best practices is a necessary prerequisite to the interpretation and discussion of the collected data. The third chapter addresses the study's methodology including the selection of an online platform, usability studies prior to implementation, online tutor/client protocol, survey instrument development and implementation, and online tutor/client records and interviews.

Chapter four presents the results of the data collected via the survey instrument (see appendix A). Information relating to client demographics, tutor/client interaction, online session content, client preparation, collaboration in online environments, as well as the efficacy and effectiveness of online tutorials is analyzed using descriptive statistics, correlations, and Kruskal-Wallis ANOVA. The survey data are systematically analyzed to determine whether statistically significant differences exist between face-to-face and online clients. Again, this comparison is not being used to determine whether one type of conferencing is more effective than another, but rather, to determine whether differences in client populations exist and whether online conferencing is an effective alternative to in-person conferencing.

Chapter five discusses the findings of the student research instrument, explores the meaning of those findings, and augments the findings with additional data culled from tutor reports (see appendix B), from interviews¹ with writing center clients (see appendix D) and tutors (see appendix E), and from online tutor observations logs (see appendix F).

¹ Permission forms were obtained from all individuals interviewed for this study (see appendix C).

Statistically significant differences are noted and qualitative data are employed to help explain why these differences occur. In some instances, such as those affected by gender, the underlying reason for the noted difference is unclear, though possible reasons can be extrapolated from free-form responses and interviews as well as previous research studies. This section also discusses areas that were not determined to be statistically significant but may be proven significant given a larger sample size, such as distance from campus. In some instances, such as differences related to ethnicity, a further analysis of data was performed by recoding and collapsing categories in logical ways.

Chapter six summarizes the study and explores its implications for writing center directors and future researchers. Writing center directors who are contemplating expanding their center's services through synchronous online tutoring are provided guidance on implementation and are given a realistic assessment of benefits and drawbacks of providing such a service. Online client demographics are also discussed since many directors add online conferencing in order to increase their center's client base. Directors need to know whether this is a reasonable expectation.

Chapter six also discusses profitable areas of future research. Online conferencing characteristics emerged during the course of this study that were not anticipated during the planning stages, and therefore, were not systematically analyzed. An example of this is the client's willingness to engage in revision during the conference: online clients appeared to revise more during their conference sessions than face-to-face clients. If this observation is true, the reason that online clients are more willing to revise during the session may be related to the fact that they are working with the actual draft and saving changes directly to their computer: clients may be more likely to see the session as one in

which they are “working” on their paper. This accuracy and validity of this observation, however, are currently unproven and could only be determined by a systematic study. The final chapter highlights this and other areas that may be productively explored by future researchers.

LITERATURE REVIEW

Writing centers, in various forms, have been in existence on high school, college, and university campuses since the late nineteenth century. In “Early Writing Centers: Toward a History,” Peter Carino (1995) finds that, while early centers were not numerous, they were “more variegated and complex . . . than what has been represented in writing center discourse” (p. 104). Tracing the origins of writing center theory and praxis to the late 1890s, Neal Lerner links writing center theory to the advent and recognition of individual conferencing as a viable technique for improving the writing skills of unprepared and underprepared college students.

Such students tend to be tied to periods of burgeoning college enrollments and changing admission standards. In the 1890s, enrollment surged as males who were not members of the elite were admitted to colleges and universities for the first time. Then, as now, college and university administrators sought ways to improve the writing of these newly admitted, underprepared students and found that one-on-one conferencing was the “best method of teaching writing” (Lerner, 2005, p. 187). In an 1894 essay appearing in *The Dial*, Brander Matthews of Columbia advocated conferencing as an instructional technique, stating that underprepared students should write essays frequently and that the essays should “be criticized in *private talks with every individual student*” (as quoted in Lerner, 2005, p. 190). He also advised that “the general tendency of the instruction [should be] affirmative rather than negative” (as quoted in Lerner, 2005, p. 190). During the same period, Amherst developed a laboratory approach to deal with the “problem of poor student writing” (Lerner, 2006).

In the 1930s, a similar spike in college enrollments occurred when the children of immigrants began entering college for the first time, creating a “more diverse and more variably prepared student body than ever before” (Lerner, 2005, p. 193). Again, college and universities turned to one-on-one writing conferences and several colleges and universities – the University of North Carolina, the University of Florida, and Dartmouth College among them – established writing labs. Between the 1930s and the 1950s college enrollments doubled, with another notable spike occurring when servicemen returning from World War II took advantage of the newly passed Serviceman’s Readjustment Act (known as the GI Bill), which provided returning servicemen reimbursement for college or vocational training (Carino, 1996). Individual writing conferences and the writing laboratories, as writing centers were then called, were established to meet the needs of this student clientele, whom many college and university administrators felt should not have been admitted and toward whom there was a thinly veiled hostility.

In the 1950 *College English* article, “The Writing Clinic and the Writing Laboratory,” Robert Moore, while praising the work of the University of Illinois writing clinic, laments the “handling of remedial composition problems as a necessary, if deplorable, part of the task of American colleges and universities” (p. 393). The writing center was where students were sent to have their writing ailments “diagnosed and given treatment” (Carino, 1992, p. 33). When seven years later, the Chairman of the English Department of University of Illinois decided to eliminate its remedial Rhetoric 100 course so that students would have to “sink or swim,” Charles Roberts, a professor in the department, defended the decision, stating “Certainly laboring to get eighteen-year old men to tell the difference between THEIR and THERE is not the proper business of

higher education” (p. 97). This view was shared by John Gerber, 1965 President of NCTE, who denounced writing centers, declaring, “In college, attempts to individualize training . . . almost always boil down to special care for the mentally lame, halt, and blind. If there are reading clinics and writing clinics for the *best* students in our colleges, I have not heard of them” (quoted in Lerner, 2005, p. 197). The backlash against underprepared students that occurred in the late 1950s led to the selective admission policies of the early and mid 1960s, a period during which writing centers all but disappeared since writing centers were then associated with the remedial student.

The Civil Rights Act of 1964, the Vietnam War, and the turbulence and protests of the late 1960s, however, resulted in yet another spike in college admissions. Nowhere was the turbulence of this period more evident than at the City University of New York (CUNY). Throughout 1968 and 1969 CUNY had been the site of civil unrest. In March of 1968, 40 white students broke into and seized the Registrar’s Office, holding it for 16 hours and demanding the college add “1000 negroes and Puerto Ricans by September” (Hawkes, 2008, p. 26). In April of 1969, six black students seized the podium at a faculty meeting and demanded the admission of all black and Puerto Rican students “regardless of grades” (Hawkes, 2008, p. 26). Later that year, 200 students broke into the President’s office and there was a general strike of students. As a result of these and other protests, CUNY decided to enact an Open Admissions policy that would guarantee every city resident with a high school diploma admission into one of its eighteen tuition-free colleges five years before it had planned to do so. In June of 1971, Kenneth Bruffee, then Director of the Writing Program at CUNY, was told that he had just two months to prepare for the influx of students enrolling as a result of the new Open Admissions

policy. Whereas previously CUNY had offered 30 composition classes, the change to an open admissions policy required that the university offer 100 composition classes (Eodice, 2008).

Many of the newly admitted students were “linguistically and culturally unprepared in general for college-level work,” (Bruffee, quoted in Eodice, 2008, p. 34) coming from what Michael Shugrue unabashedly characterized as “America’s ghetto schools” (1970, p. 250). Throughout the country there was a huge influx of new students as colleges opened their doors to students previously denied admission:

Several new genres of students came to our campuses who twenty years before would not have been admitted for a variety of academic and social reasons. These included women, nontraditional students (i.e., working adults), poorly prepared undergraduates, English as a second language (ESL) immigrants, recently discharged and disenfranchised military, minority pupils, and those with inadequate academic successes given the crumbling inner-city school systems to name a few. (Wallace, R. & Wallace, S., 2006, p. 46)

Just as during the 1890s, 1930s, and 1950s college and university administrators scrambled for a solution to their “problem,” and once again they turned to writing centers. The resurgence of writing centers was due in part to what administrators saw, and still see, as a need for “crisis intervention” (Boquet, 1999. p. 465). In “Toward a Comprehensive Curriculum,” Karen Spear observes that many writing centers in the late 1960s and early 1970s focused on mechanics, hoping for a quick and relatively inexpensive fix to their students’ writing problems:

Flooded with open admissions students and mandated to improve their language skills quickly, organizers of writing centers had to devise some quick-fix approaches that would produce tangible results. Hence, the basic model of the first generation of writing centers was conceived – the self-paced, tutor-assisted, competency-based review of grammar. (Spear, 1982, p. 35)

This quick-fix mentality over-emphasized grammar and mechanics (Boquet, 1999; Lerner, 1998). Neal Lerner labels such centers or labs “houses of remediation” (1998, p. 135) while Andrea Lundsford uses the metaphor of the “Center as Storehouse” to describe them (1991). These centers serve as “repositories of knowledge” where students receive and gain knowledge (Lundsford, 1991, p. 96); they are linked to an objectivist epistemology that sees knowledge as exterior to the student (Hobson, 1992).

Even as this reactionary movement was taking place, Kenneth Bruffee, Director of Writing at CUNY, was collaborating with Mina Shaughnessy, also of CUNY, developing a new approach using an old construct: the one-on-one writing conference. Bruffee’s 1972 book, *A Short Course in Writing*, was revolutionary in rethinking the roles of teacher, mentor, and student (Kail, 2008). Bruffee focused less on grammar and more on critical thinking. In Bruffee’s model, peers work collaboratively with writers to provide “a supportive inquiring audience for the work in progress, asking questions, suggesting clarification, while all the time checking with the author to see if that was his or her intent” (Sterling, 2008, p. 22). Bruffee, like those before him who had faced similar problems, realized that the most effective way to improve a student’s ability to write is through the one-on-one conference; however, with 100 sections of composition

taught primarily by adjuncts scurrying from campus-to-campus, individual student-teacher conferences were hardly feasible. Even in 1930, “the average teaching load for a first-year composition instructor was ninety-three students” (Lerner, 2005, p. 194). If an instructor were to conference with every student for one hour a week, this would result in a 105-hour work week” making a “fifteen or twenty minute” conference “a couple of times per semester as much as was feasible – if not humane” (Lerner, 2005, p. 194).

Given the huge number of students enrolling at CUNY and the large number of adjunct instructors employed to teach them, Bruffee realized that one-on-one conferencing between teacher and student would be near impossible; and upon further reflection, he realized that it was not only nearly impossible, but also unadvisable. Bruffee developed “The Brooklyn Plan” (1978), which trained peer tutors to work with writers in one-on-one conferences at conveniently located centers across CUNY campuses. The conference technique described in *A Short Course in Writing* forms the foundation for the collaborative peer conference used in writing centers today. By transforming the teacher-student conference to a peer conference, the one-on-one conference becomes more affordable, student apprehension is lessened, institutional hierarchy is flattened, and peer tutors learn about writing through collaborative interaction.

In addition to creating – or at least reinventing – the one-on-one peer writing center conference, Bruffee can be credited with seeing the need for writing instructors, writing administrators, and writing center directors to meet, discuss, and contribute to research on writing and tutoring. When told that CUNY would open its doors to all city residents with a high school degree, Bruffee contacted fellow writing program

administrators and instructors, among them Mina Shaughnessy, whom Bruffee was to later characterize as “the only one that knew what she was doing” (quoted in Eodice, p. 34.). Shaughnessy and Bruffee began meeting informally with other writing instructors and administrators, forming what would become known as the “Shaughnessy Circle” (Sterling, 2008). Members of this group ultimately formed the Council of Writing Program Administrators (WPA), and Harvey Weiner, a member of the Shaughnessy Circle, served as WPA’s first president from 1979 to 1985.

During the 1970s, writing centers continued to flourish because of Open Admissions as well as programs aimed at increasing diversity and minority enrollments. Whereas the typical college student of the 1960s was an eighteen to twenty-one year old white male, the student of the 1970s was just as likely to be a woman or a member of a minority: many were nontraditional in age and many were underprepared for college. The large number of writing centers established to help these students led in 1973 to a special committee being formed at the Conference of College Composition and Communication (CCCC) to investigate “skills centers.” In 1977, Muriel Harris began planning her future publication, *The Writing Center Newsletter*, collecting names at CCCC for a mailing list. As writing centers grew, so did the feeling that writing centers “might serve the entire campus community and beyond” (Kinkead, 1996, p. 132). Writing center scholar Joyce Kinkead identifies 1979 as a “benchmark” year in that the Writing Centers Association (WCA) met for the first time. Several regional writing center associations also formed, and it is from one of those, the East Central Writing Centers Association led by Nancy McCracken, that the National Writing Centers Association (NWCA) was born, receiving the formal designation of an assembly from National Council of Teachers of English

(NCTE). A formal charter was subsequently drawn up at the NWCA's first board meeting at the 1982 NCTE conference. The name National Writing Centers' Association was later changed to International Writing Centers' Association (Simpson, n.d.).

The growth of professional organizations associated with writing centers led to a greater interest in writing center theory, pedagogy, and praxis since professionals within the field were now able to communicate and exchange ideas on a regular and formal basis. In 1980, Muriel Harris published the first issue of the *Writing Center Newsletter*; by 1981 the publication had over a thousand subscribers (Kinhead, 1996). *The Writing Center Journal*, an official peer-reviewed publication of IWCA, also began publication in 1980, with its primary purpose being "to publish original research of interest to writing center professionals and to those forging connections between writing centers and the wider arenas of rhetoric and composition studies" (Aims and Scope). In 1991, Lady Falls Brown began WCenter, an asynchronous online communication forum for writing center directors and tutors. This development was followed in 1994 with the first National Writing Centers Conference. Since that time, numerous blogs and online publications have been established, most notably *Praxis: A Writing Center Journal*.

Writing Center Theory, Pedagogy, and Praxis

In 1946, Levette Davidson and Frederick Sorenson, English professors at the University of Denver, outlined a psychoanalytical approach to communication skill development in their *College English* article, "The Basic Communication Course." The fifteen-credit course taught jointly by the Speech and English departments was originally intended for remedial students but proved so popular and effective that it was eventually required of all first-year students. Drawing on the work of psychologist Carl Rogers,

Davidson and Sorenson coupled the basic communication course with writing laboratory work, sending students to a writing laboratory where they would work individually with a graduate assistant one-on-one. The graduate assistants who staffed the laboratory were taught to draw out the individual through questions and to be supportive rather than critical of the individual's work, helping the student overcome his fear of writing.

Davidson and Sorenson credit Rogers as influencing their approach. In "Communication: Its Blocking and Facilitation," Rogers explains "The task of psychotherapy is to help the person achieve through a special relationship with a therapist, good communication within himself. Once this is achieved, he can communicate more freely and effectively with others" (p. 455). Central to this approach is an empathetic "understanding *with* a person, not *about* him" (p. 457).

This emphasis on the individual's perception and the importance of empathetic listening and understanding lay dormant during much of the 1950s and 1960s during what Neal Lerner has termed the "skill and drill" period of writing center development (1998). It re-emerges in the 1970s and 1980s during an epistemological shift from "writing center as storehouse" model to "writing center as garret" model (Lundsford, 1991, p. 93). Whereas the "fix-it shop" or "storehouse" model of the writing center depends on seeing knowledge as an external construct, the "garret" writing center locates knowledge within the individual (Lundsford, 1991). This model is strikingly similar to Rogers' approach in that communication is an internal construct which must be drawn out of the individual; and it is similar to the theories propounded by compositionists Ken Macrorie in *Telling Writing* (1985); Peter Elbow in *Writing without Teachers* (1973); and Donald Murray in *A Writer Teaches Writing* (1982). The writer's individual voice is

valued as authentic and unique: the writing consultant draws this voice out through probing questions. Knowledge in the garret model of writing center is “interior, solitary, individually derived, and individually held” (Lundsford, 1991 p. 94). Hobson labels this period of writing center development and centers based on this epistemological construct as “expressionistic” (1992, p. 68).

The expressionistic model of the “writing center as garret” is reflected in North’s “The Idea of a Writing Center” (1984). Stephen North stresses what has become the mantra of every writing center director: the goal of the writing center conference is to “produce better writers, not better writing” (p. 69). According to North, the “modern” writing center “represents the marriage of what are arguably the two most powerful contemporary perspectives on teaching writing: first, that writing is most usefully viewed as a process; and second that writing curricula need to be student-centered” (p. 69). North identifies the “essence of the writing center method” as “talking.” The writing center consultant’s job is to “really listen” and “to draw [students] out, ask them questions, they would not think to ask themselves” (p. 71). The direction of the tutorial must always derive from the writer (North, 1982). Through this Rogerian approach, the writer discovers that knowledge resides within the self and gains confidence in his or her writing abilities.

The “expressionistic” view of writing and its attendant emphasis on the writer’s inner self is a natural outgrowth of Cartesian epistemology and its emphasis on visual metaphors to describe cognitive thought (Bruffee, 1986). These metaphors have shaped the way scholars and instructors think about “knowledge, scholarship, and research,” generating the polarities of an outer, objective reality and an inner, subjective reality:

“This polarity of cognitive language derives from the traditional epistemological notion that the human mind is equipped with two working elements, a mirror and an inner eye. The mirror reflects outward reality. The inner eye contemplates that reflection” (Bruffee, 1986, p. 776). Such polarity sees two types of knowledge: exterior knowledge frequently aligned with the writing center as “fix-it shop” model and interior knowledge frequently aligned with the model of writing center as “garret.” Given these constructs, writing center directors in the 1970s and 1980s turned away from the “storehouse” model, in which knowledge is an exterior reality to be mastered through skill and drill, and chose in its place the expressionistic “garret” model, with its emphasis on individuality and inner truth.

In *Teaching One-to-One*, (1986) Muriel Harris adopts the expressionistic, reflective approach: it is the teacher’s job to guide the student in a journey of exploration and self-discovery from which meaning will emerge: “The teacher’s conference role is to encourage this exploration, to help students move through the process of discovery by talking with them, asking questions, and generally keeping up the momentum of exploration” (p. 6). Similarly, according to Christina Murphy, in writing center conferences the “tutor’s role often is primarily supportive and affective, secondarily instructional, and always directed to each student as an individual in a unique, one-to-one interpersonal relationship” (“Freud,” 1989, p. 206). The student should always maintain control of the paper and be responsible for making any corrections or revisions. Writing consultants draw students out through questions rather than provide explicit directives: they engage in “minimalist” tutoring, letting students do the work (Brooks, 1991).

Consultants do not tell writers what to do: they ask questions that will cause writers to think through problems and arrive at their own solutions.

The importance of nondirective, “student centered” conferences is also stressed in Harris’ “Collaboration Is Not Collaboration, Is Not Collaboration” (1992a). The dialogic process of the writing conference is not true collaboration, according to Harris, in that the comments made by writing center tutors are “non-directive.” Writing center conferences differ from collaborative classroom peer review sessions in significant ways (Harris, 1992a). Francine Davis’ (1982) collaborative classroom workshops in which students ask questions, make suggestions for revision, agree or disagree with the recommendations of their peers, and explain intentions about stylistic choices are characterized by Harris as “too directive”; however, even in Harris’ work, the line between what is and is not collaboration often blurs. In “The Writing Center and Tutoring WAC Programs,” Harris suggests that

All writers need – and benefit from – readers with whom they can interact as a paper takes shape, skilled coaches who can offer appropriate guidance as the writer moves through the various writing processes, and responders who can offer meaningful response to and evaluation of a final draft.

(1992b,p. 154)

This approach is similar to Davis’ with one important difference: training. Class participants are not “skilled coaches” and the advice they offer may or may not be appropriate.

The need for “trained” peer tutors, while almost universally acknowledged, creates a problem for writing center directors and composition theorists (Kail, 1983). Peer

tutors, it is believed, are less threatening than paraprofessionals or teachers: using peers rather than professionals flattens the hierarchical structure that typifies academia.

However, at what point does a trained tutor become a professional rather than a peer?

This question underlies Trimbur's "Peer Tutoring: A Contradiction in Terms." According to Trimbur, tutors are often plagued by a "cognitive dissonance" as they switch between the "apprentice model" and the "co-learner model" (1987, p. 292). In "Training and Using Peer Tutors," Bruffee also cautions against turning tutors into "little teachers": tutors should, at least initially, see themselves as co-learners (not apprentices) allowing them to break with the traditional hierarchical structure that defines academia (1978, p. 294).

Though Kenneth Bruffee's Brooklyn Plan advocated peer tutoring, co-learning, and collaboration, Bruffee did not tie the plan to social constructionist theory until more than a decade later. In a 1986 *College English* article, "Social Construction, Language, and the Authority of Knowledge: A Bibliographical Essay," Bruffee admits "Until a very few years ago, I had never heard the term 'social construction'" (p. 773). Perhaps this is because the term and the theory it embodies first appeared in disciplines other than composition and communication, disciplines such as science, sociology, and psychology. Bruffee traces social constructionist thought in the twentieth century to Thomas Kuhn's *Structure of Scientific Revolutions* (1964). Kuhn sees scientific knowledge not in the Cartesian terms of exterior or interior, objective or subjective; instead, scientific knowledge is a social construct. Richard Rorty's *Philosophy and the Mirror of Nature* (1979) goes beyond Kuhn by claiming that all knowledge is a social construct. Clifford Geertz' 1983 collection of essays, *Local Knowledge*, emphasizes the cultural diversity

and multiplicity of contemporary life and further demonstrates that what “we normally think of as strictly individual, internal, and mental affairs” are actually social affairs (Bruffee, 1986, p. 777). Hence, social constructionist epistemology, unlike Cartesian epistemology, does not emphasize external and internal polarities; instead it draws on consensus. Social constructionist thought “assumes that there is no such thing as a universal foundation, ground, framework, or structure of knowledge. There is only an agreement, a consensus arrived at for the time being by communities of knowledgeable peers” (Bruffee, 1986, p. 777).

John Trimbur’s “Collaborative Learning and Teaching Writing” ties social constructivist thought and writing center praxis to Lev Vygotsky, a social psychologist whose work on child development is closely related to social constructionist epistemology. Vygotsky’s *Thought and Language* (1934) explores how children develop language and learn to think analytically. Children learn “signs,” words and their significance, through their parents and other representatives of their culture. Eventually the child learns to speak using words as a tool of social interaction. As children grow older they begin to use self talk and eventually internal speech in order to think critically. In essence, I speak, therefore, I think: oral communication is a necessary prerequisite for analytical thought. Language is a social construct, and when humans externalize their thoughts through the social construct of words, they contribute to “human interdependence” and the “conversation of mankind” (Bruffee, 2008, p.5).

In “Peer Tutoring and the ‘Conversation of Mankind,’” Bruffee again draws a connection between collaboration and constructivist learning theory and links collaborative writing conferences with the work of Richard Rorty, Stanley Fish, and

Thomas Kuhn – all of whom consider knowledge a social construct. Bruffee rejects the teaching of rhetorical models, as well as the accompanying view that knowledge consists of collecting and synthesizing information from the objective world (the role of the writing center as repository). In the place of what have traditionally been seen as diametrical relationships – text and reader, text and writer, symbol and referent, student and teacher – Bruffee calls for a collaborative, “social symbolic process” (Bruffee, 1984, p. 207). In collaborative conferences, students meet within “a community of knowledgeable peers . . . who accept, and whose work is guided by, the same paradigms and the same code of values and assumptions” (1984, p. 211).

The benefits of collaboration are reflected in social-constructionist epistemology and more specifically, social-constructionist learning theory (Hobson, 1992; Bruffee, 1984). Individualism and the belief that knowledge is an exterior or interior construct is supplanted by the belief that knowledge is a social construct derived through discussion and consensus: “knowledge is created, maintained and altered through an individual’s interactions with and within his or her ‘discourse community’” (Petraglia quoted in Bruffee, 1984, p. 38). Constructionist learning theorists believe that reality includes knowledge and beliefs about the self and others; reality is arrived at through consensus; consensus and knowledge are arrived at through discourse; and reality changes as discourse and consensus change (Murphy, 1994). As tutor and client interact, they create knowledge, both learning from one another.

This constructivist epistemology that embraces the view that language, knowledge, and even reality are social constructs rooted in our beliefs, appreciations, and subjective world views, also finds that the beliefs, appreciations, and world views that

construct “reality” can be changed through social interaction, reflective learning, and metacognition. This view lies at the heart of many contemporary writing center conferences conducted in a physical setting where tutor and client are face-to-face. Learning is made possible through a dialogic interaction between student and tutor that results in reflection, metacognition, and knowledge creation: “Tutors, because they function in a nonevaluative, supportive environment, offer writers the opportunity to write, think, and talk with someone who through collaborative talk and questioning helps the writer use language to develop ideas, to test possibilities, to re-see and rethink in the light of the feedback from the tutor” (Ede & Lundsford, 1983, p. 156).

Though social constructionist thought as well as “Bruffee-inspired collaborative learning and peer tutoring” may now be “so thoroughly integrated into composition teaching” that “it goes without saying,” (Trimbur, 2008), such acceptance was far from widespread in the 1980s. In response to Bruffee’s, “Collaborative Learning and the ‘Conversation of Mankind’” in *College English*, Thomas Johnson of Texas A & M University of Galveston wrote, “When Mr. Bruffee advocates ‘collaborative’ learning through peer pressure . . . and advocates the inculcation of ‘normal’ modes of communication and thinking, he seems to be falling, however benignly, into the same camp of reformist social engineers as the somewhat more aggressive ideologs of Nazism, Fascism, and Communism” (1986, p. 76). The reactionary nature of this statement is shocking but heartfelt.

Johnson’s objection to “normal discourse” can be seen as similar to the objections expressed by NCTE to what English teachers and compositions traditionally have termed “standard English,” which, according to the 1972 CCCC Committee on Language, is

simply “the language used by those in power in the community” (1974, p. 2) “Standard English” is the dialect of the middle-class background: students who write and speak it “have built-in advantages that allow them to succeed” (CCCC, 1974, p. 2). To codify the committee’s stance on the equality of all oral and written dialects, the following resolution was passed at the 1972 CCCC:

We affirm the student’s right to their own patterns and varieties of language – the dialects of their nurture or whatever dialects in which they find their own identity and style. Language scholars long ago denied that the myth of a standard American dialect has any validity. The claim that any one dialect is unacceptable amounts to an attempt of one social group to exert its dominance over another. Such a claim leads to false advice for speakers and writers, and immoral advice for humans. A nation proud of its diverse heritage and its cultural and racial variety will preserve its heritage of dialects. We affirm strongly that teachers must have the experiences and training that will enable them to respect diversity and uphold the right of students to their own language. (CCCC, 1974, p. 3)

This stance is not opposed to the social constructivist view, as Thomas Johnson implies, but is actually in alignment with social constructivist theory. Normal discourse is not imposed: “it is agreed to and accepted by the members of a language community” (Bruffee, 1986, p. 77). Individuals, while raised in the language community of their family, eventually learn and adapt to other language communities, for example, the neighborhood, the school, and the workplace. We all belong to multiple discourse communities; however, according to Bruffee, “Much of what we teach today – or should

be teaching – in composition and speech courses is the normal discourse of most academic, professional and business communities” (1984, p. 211). This assertion is more likely the basis of Johnson’s concern than Bruffee’s comments on social constructionist learning theory.

Similar concerns are still manifested in WCenter conversations, particularly when the subject of grammar is raised. Given that no dialect is inherently better than another, it follows that variants in grammar should be tolerated if not embraced. Clearly the 1972 Committee on Language was correct in stating that “Spoken dialect makes little difference in the performance of many jobs, and the failure of employers to hire blacks, Chicanos, or other ethnic minorities is often simply racial or cultural prejudice” (1974, p. 14). Less clear is the role of written language in the workplace. Dasha Marshall, in a 2005 WCenter e-mail writes,

And if our students *have* gotten to college lacking in these "lower order" skills [grammar] and we don't help them identify and correct their errors, are we not contributing to their victimization in a class system in which well-heeled suburban kids from "good" schools continue to get the best grades, the best jobs, and hold the reins of power while others, whose background and education did not confer upon them a natural competence with "mainstream" American English, fail to be granted even the chance to succeed?

Ron Scheer in “Taking Care of Business in the Writing Center,” makes a similar point when he observes, “For many audiences correctness matters” (2005, p.4).

In addition to the philosophical reluctance Johnson expressed, other educators initially objected to social constructionist theory and collaborative praxis due to pragmatic rather than philosophical concerns. As institutions of higher learning, colleges and universities have always prized academic integrity, and until recently, collaboration was frequently viewed as an assault on academic integrity; a student who collaborated with others was not doing his or her own work. Collaboration, quite simply, was cheating. However, the epistemological shift in learning theory and collaboration has led to what Lunsford identifies as the most recent evolution of writing centers: the “Burkean Parlor” (1991). These centers, based on social constructionist learning theory, embrace collaboration, prize diversity, and prepare students for the collaborative environment of the twenty-first century. “Collaboration is the norm in most professions,” states Lunsford, who identifies seven specific benefits to collaboration: (1) collaboration helps students find and solve problems; (2) collaboration helps students understand abstract concepts and ideas; (3) collaboration is naturally interdisciplinary and helps students transfer and assimilate information from discipline to discipline; (4) collaboration leads to greater critical thinking skills and helps students understand the positions of others; (5) collaboration leads to higher achievement; (6) collaboration promotes excellence; and (7) collaboration hones both synthetic and analytical skills because it engages the student in reading, talking, writing, and thinking (1991, p. 97).

Constructivist Epistemology and the Online Writing Center

The question among writing center theorists is no longer the efficacy of writing centers, nor the validity of social constructivist learning theory, nor the value of the traditional face-to-face writing center conference – the value of all have been proven.

The question that faces writing center directors today is whether or not the success of the traditional, dialogic, collaborative writing center conference in which knowledge is constructed through interaction can be replicated in an online environment. Mohr argues, for example, that the core of the “real” writing center has a humanistic quality that cannot be replicated in a “virtual” center (2000, p. 4). She laments what she sees as a rush among writing center administrators to move online into a “one dimensional environment” and argues that “online tutoring cannot address the issue of diversity in learning styles, multiple intelligences, or cultural background” (2000, p. 6). One critic of online conferencing, Michael Spooner, claims that it is “next to impossible” to achieve a “student oriented, non-directive, response oriented” tutorial online (1994, p. 6.). Ray Wallace concurs, arguing that “Only a human voice, a reader, and, in the context of a tutoring session, a face across the table can give contextual feedback to the writer in real-time – when it is most important” (1998, p. 169).

Even Muriel Harris, whose Purdue OWL was and still is the most visible online writing center in the country and perhaps the world, has often expressed strong reservations about going online; however, ultimately she argues that writing center directors must embrace the direction that society is headed in, a direction that is increasingly digital (2002, p. 13). Harris sees digital literacy as becoming increasingly important as we move into the twenty-first century: “Writers will need to acquire basic computer literacy in how to word process, and e-mail, engage in online interaction, and navigate the World Wide Web” (2000, p. 196). The internet will continue to grow and develop, writing centers will take on “new shapes,” and new learning environments will be created that we “cannot yet predict” (Harris, 1995, p. 4). Many writing center scholars,

like Harris, see writing centers and their directors as being at the forefront of a technological innovation. Writing centers “stand poised to lead institution-based movements toward technology and learning,” according to Gail Cummins (2000, p. 209), whose view is shared by Pamela Childers, an advocate of new technologies (2006), and by James Inman, author of *Taking Flight with OWLs* (2000) and *Computers and Writing The Cyborg Era* (2004).

Early OWLS: MUDs and MOOs.

Early synchronous writing centers, commonly known as MUDs² (multi-user domains) or MOOs³ (multi-user object-oriented), were at the forefront of technology and writing center pedagogy during the late 1990s. While MUDs and MOOs have been replaced by e-mail tutoring, chat sessions, and synchronous platforms such as iLinc, Wimba, Elluminate, Breeze, and WebEx, they are instructional to those in the writing center field both for their successes and their failures. These early precursors of today’s synchronous online writing centers created what Inman has called a “pedagogical revolution” (Inman, 2004, p. 122).

Gail Hawisher and Joel English were among the first to link MUDs and MOOs to social constructivist learning theory. Hawisher observes that “until the profession

² MUDs, an acronym for multi-user domains, were an early form of online chat room. Multiple users could meet online synchronously, engaging in the discussion by typing text. These operated in much the same way as chat rooms operate today. Session transcripts could be saved and printed.

³ MOOs, an acronym for multi-user object-oriented domains, were similar to MUDs and to early digital computer games that used text descriptors to create a virtual environment. Multiple users could meet in and share an online environment, communicating with one another by typing text into their individual keyboards. Unlike MUDs, MOOs attempted to create a virtual world through text, and users could manipulate objects within that virtual world. For example, a student entering a writing center MOO might be greeted by the tutor with a virtual handshake, asked to sit down on a virtual sofa, and even offered a virtual drink. It was hoped that these domains would be able to recreate the look and feel of a face-to-face writing center. As with MUDs, session transcripts could be saved and printed.

accepted and endorsed the view of meaning as negotiated, texts as socially constructed, and writing as knowledge creating, we were unable to value the kind of talk . . . that electronic conferences encourage” (1992, p. 88). English, like Hawisher, links electronic conferencing and MOOs to metacognition, the “writers’ knowledge of how they write or learn” (2000, p.172). MOOs promote metacognition by engaging the student in the immediately recursive thought that Donald Schön (1983) identifies as “learning-in-action,” a pedagogical practice particularly effective when working with adult, nontraditional students. Revisiting session transcripts promotes a second type of reflective learning also of significant value to adult, nontraditional students, “learning-on-action,” during which the learner reflects post-activity on what has been done (Schön, 1983).

In “At Home in the MUD” (2003), Eric Crump also praises MUDs for fostering reflection, metacognition, and collaborative learning. MUDs allow the student to become “immersed” in conversation, and the “capturability” of that conversation allows students “a second glance” (2003, pp. 248-50), leading to reflective learning. In addition, using a MUD allows students geographically distant from the center to have their work reviewed without having to travel, and according to Crump, MUDs mitigate the hierarchical and somewhat threatening environment of the face-to-face conference, creating an environment that is “nearly free of fear” (p. 24).

Crump’s belief that apprehensive students are more comfortable meeting online rather than face-to-face is shared by many advocates of online conferencing; however, empirical evidence to support the claim is lacking. While younger students, “digital natives,” may be more comfortable meeting online, there is some evidence to suggest that

older, nontraditional students, “digital immigrants,” are intimidated by the online environment, viewing it as another hurdle to be negotiated⁴. Students using English’s early writing center MOO had to learn and acclimate to the virtual environment so that they could fully interact with the virtual world. Once acclimated, students could manipulate objects, sit on the sofa, pet the dog, and move their avatar. While some students fell in love with this virtual world, others complained that it took time and focus away from the actual conference, seemed silly, and created an unprofessional atmosphere (2000, p. 173). While these comments do not reflect the preferences of all or even most MOO users, they demonstrate the importance of tailoring the online platform to the client base.

Determining the appropriateness of a platform is difficult at best, but one measure may be the use it receives. In “Cyberspace and Sofas: Dialogic Spaces and the Making of an Online Writing Lab” (2000), Eric Miraglia and Joel Norris recount the history of their online writing center at Washington State, which received a remarkable 400 submissions in its first three months of existence. This writing center had features of a MOO in that it boasted a friendly graphic interface, but was more closely allied to a MUD in that multiple users were able to view and comment on writing, both asynchronously and synchronously, through postings and chat rooms. In this early precursor to a blog, Washington State University tutors and students interacted in a variety of ways: tutor-tutor, tutor-student, student-student, and multiple synchronous interactions within chat rooms (Miraglia & Norris, 2000).

⁴ Marc Prensky coined the terms “digital native” and “digital immigrants.” Digital natives have grown up with digital technologies and speak the language of technology fluently. Digital immigrants grew up before the advent of digital technologies.

Miraglia and Norris describe their OWL as an attempt to “avoid authority laden, monolithic responses of expert-to-novice e-mail exchanges in favor of more open-ended, discursive dialogues derived from multiple authorized and unauthorized voices” (2000, p. 97). While most responses were strongly positive, Miraglia and Norris note that some responses were not in keeping with the friendly, non-threatening environment that they envisioned. One student, obviously frustrated with the posted criticism of his work writes,

Although it is obvious that you can't look into a paper enough to find things other than the ones that are blatantly obvious. Please I would just like opinions to make my paper better. That was my rough draft and I was just thinking of some sort of ending. (p. 98)

In another instance, a tutor responds sarcastically to a student's writing: “I hate to be rude but what opinion are you trying to put forth? This is an essay, after all” (p.100). Though the tutor appears to preface his remarks with an apology, “I hate to be rude,” many a writer would be wounded by the comment that follows, “This is an essay, after all.” Such responses, though few in number, could seriously impede a writer and make her reluctant to submit additional writing samples, particularly in so public a venue. The same concern should be considered in relation to general-access blogs, wikis, and social networking sites, some of which allow unedited, dialogic responses that may be inappropriate.

Contemporary OWLS: Choosing a Platform

While MUDs and MOOs have faded from the writing center landscape, online writing centers have increased, albeit marginally, in number and variety as colleges and universities move online to capture the fastest growing segment of the student population:

nontraditional students. In Henry Brickell's study of nontraditional students, *Adults in the Classroom* (1995), adult students ranked convenience as a deciding factor when choosing a college. Adult, nontraditional students generally work full-time and seek colleges and universities that will allow them to continue working while completing an undergraduate or graduate degree. Blended and online courses are particularly attractive to these students, as are colleges and universities that provide online support services such as learning and writing centers (Harris, 2000; Weeks, 2000).

Compositionists agree when providing writing center services online, choosing an appropriate technology platform that retains the positive, proven collaborative qualities of the traditional face-to-face conference is a critical first step. The choice of platform is driven by the writing center director's theoretical and pedagogical beliefs, coupled with practical concerns such as usability, staffing, and cost. Before adopting a technology, it is important to understand and predict the technology's impact on users: students, staff, and the writing center itself.

In *Critical Theory of Technology* (1991), Andrew Feenberg identifies two distinct technology theories: the instrumental theory and the substantive theory. The instrumental theory posits that an organization's use of technology does not affect the organization's culture, that success or failure is dependent upon an individual's technology proficiency rather than on the technology itself. An instrumental approach, according to Stuart Blyth, suggests that "on-line work and interaction isn't fundamentally different from face-to-face interaction" (1996).

Conversely, a substantive approach suggests that significant differences between online and face-to-face consultations could exist as a result of the chosen technology, and

that these differences could affect conference quality. Substantive technology theory argues that technology design can fundamentally change the nature of an interaction and the culture of an organization, that the success or failure of an interaction is more often linked to the technology rather than the user.

Of course, neither an instrumental nor a substantive view can alone account for success or failure; we must consider both when choosing an online conferencing platform. The technical abilities of users, their access to the internet, the capabilities and reliability of technology platforms, as well as to the potential impact of such services all should be carefully considered before launching any online service. Maintaining the quality of individual tutorials is directly related to the choice of an online technology as well as the training and methodology associated with its implementation. Inman warns that “institutions sometimes seek the most advanced technologies without regard for what those technologies might mean for the people who use them” (2004, p. 278). Again, issues such as accessibility, technology proficiency, and reliability must be carefully considered, especially when the technology is being used by nontraditional students.

Asynchronous Writing Center Tutoring: E-mail

Nontraditional students are most comfortable with technology that has become pervasive and familiar, such as e-mail, which began decades ago. The first scholarly article on e-mail tutoring, Joyce Kinkead’s “The Electronic Tutor,” appeared in 1988 and presented e-mail tutoring as a way of meeting the needs of the nontraditional student. Asynchronous e-mail tutoring is still the most commonly used methodology for online conferencing. A 2005 study found that 23% of online writing centers used asynchronous tutoring, while just 6% of online writing centers used synchronous tutoring, to augment

their face-to-face tutoring services (Mackiewicz, 2005). Five years later, data from Writing Center Research Project show a slight decrease in the number of writing centers hosting online consultations; however, among writing centers hosting online conferences, there was a substantial increase in e-mail consultations. Whereas previously 74% of online consultations were conducted via e-mail, now 90% of online consultations are conducted via e-mail; synchronous consultations have actually lessened in number.

The reasons behind the continued popularity of e-mail consultations are both simple and complex. Asynchronous technology has been available far longer than synchronous technology, so many writing centers began with and have become proficient at using e-mail as a means of consulting with students who are unable to meet face-to-face with a writing consultant. Also, e-mail tutoring is convenient. Since asynchronous tutoring does not require a meeting, either face-to-face or virtually, both consultant and student can post and work at a time that is convenient for them. This flexibility is particularly important for writing centers serving geographically dispersed, nontraditional student populations, such as University of Maryland University College (UMUC). When students are dispersed “throughout the globe” (Online, 2007, p. 41), as UMUC students are, time differences make synchronous consulting tricky, if not impossible. Another advantage of e-mail conferencing is that there are no missed meetings, no time spent waiting online for students who do not show, and consequently, no wasted money.

Many scholars (Hartman, 1991; Mabrito, 2000; Hiltz & Turoff, 1978) theorize that an added benefit to e-mail tutoring is that it attracts apprehensive writers “unwilling to go to the Writing Center for additional help because they [are] ‘afraid to go through the door’” (Kinkead, 1987). These writers may find the online environment less threatening

because it is an environment characterized by “psychological distance” (Hiltz, 1978, p. 94): written comments are “more private” than oral comments so apprehensive students are more likely to meet online rather than go to a center which is public (Mabrito, 2000). This theory seems sound, but it has not yet been substantiated by empirical research.

Empirical evidence of the efficacy of e-mail tutoring has been provided, however, by Beth Hewett and Christa Ehmann, whose text *Preparing Educators for Online Writing Instruction* (2004) is read and followed by many online practitioners and writing center directors. As trainers for SmartThinking, a company that markets online tutorial services for colleges and universities, Hewett and Ehmann have developed training protocols for asynchronous and synchronous (chat) tutoring. Students send their papers to SmartThinking along with a description of the problem they would like to see addressed. At SmartThinking, a trained online tutor reads, comments on, and returns the essay. Ideally, students then revise their essays, using the comments they have received to guide them. Tutors are trained to address the paper using Mina Shaughnessy’s hierarchy of concerns: (1) fluency – ideas identification and development, (2) form – organization, (3) correctness – mechanics, grammar, and syntax. Tutors are also instructed to be “critically kind” (Hewett & Ehmann, p. 75).

The protocol SmartThinking tutors follow in responding to student submissions is similar, though not identical to, the protocol Barbara Monroe describes in her 1998 article “The Look and Feel of the OWL Conference.” Monroe identifies three discernable aspects of e-mail feedback: (1) the front note which opens with friendly comments that develop rapport, (2) intertextual commentary in which specific areas are highlighted and discussed (problems with content or grammar, for example), and (3) the end note in

which the tutor summarizes the suggestions, encourages revisions, and reminds the student of the center's face-to-face services (p, 10). Paula Gillespie and Neal Lerner add the following advice regarding e-mail response: make the session personal, start with the positive; think higher level concerns before lower level concerns; and respond as a reader (2003, p. 159).

Unlike Beth Hewett and Christa Ehmann, who see tutoring online as distinctly different from tutoring face-to-face and use protocols such as in-text commentary, other writing center directors and practitioners stick to a more traditional approach, one that emulates as closely as possible the face-to-face tutorial. In "Interfacing with the Faceless: Maximizing the Advantages of Online Tutoring," J.A. Jackson argues that ". . . virtually everything one is taught about effective f2f [face-to-face] tutoring lies at the core of successful online interaction between tutor and writer: make sure the writer takes ownership of his or her own work, always ask questions, and allow the writer to make the necessary corrections" (p. 3). According to Jackson, tutors should first be trained in the face-to-face environment before moving to online tutorials. Questioning students, even asynchronously, compositionists agree, promotes reflective thinking, leads to an increased awareness of writing issues, and increases metacognition. In addition, an e-mail tutorial provides a document that can be revisited, increasing reflection and collaborative learning. The tutor also learns through metacognitive reflection as he formulates his written response to the student's submission.

In "Protocols and Process in Online Tutoring" (2003), George Cooper, Kara Bui, and Linda Riker suggest that a friendly tone is as essential in e-mail conferencing as in face-to-face conferencing and argue that "painstakingly correcting every error makes a

tutor feel exhausted, while the student who receives the corrected paper feels ashamed” (2003, p. 260). This advice is pedagogically sound. Effective responses require tutors to reflect carefully, not only on the paper that they are reading, but also on the response they are crafting, forcing tutors to confront issues of audience, tone, and content in their own writing as well as the student’s writing.

Despite obvious theoretical and practical advantages, e-mail tutoring has been the subject of controversy and criticism, though whether that criticism is merited is itself a subject of debate. Many students – and some faculty – have a tendency, even after decades of writing center practice, to view the center as a “fix-it” shop. Faculty worry that tutors will correct the student’s paper rather than provide advice. Students, too, often perceive the online writing center as an editing service at which they can drop off their papers and receive them back a day or two later greatly improved, not by their efforts but via the efforts of their writing consultant, or – as students see it – the professional editor who is paid to polish their work. Writing center director Harry Denny reports that when working in concert with a high school, his writing center tutors began e-mail tutoring for the high school students, “the students, the teachers, and the administrators wanted more evaluation The teachers and students wanted corrective and assessment minded feedback not probing questions [e.g. ‘What do you think about . . . ? and affective responses [e.g. I like]” (1995, p. 2).

A preference for directive tutoring in e-mail consultations is evident not only among students, but among tutors as well (Bell, 2006). Sharon Thomas, Mark Hara, and Danielle DeVoss report that when their center instituted e-mail tutoring, tutors became more directive in their responses. The authors’ observations led them to conclude that e-

mail tutoring changed the writing conference substantively: writing consultants “quickly fell into a far more evaluative mode, one they described as acting like a teacher” (2000, p. 67). Writing center director Jeffery Baker is even more critical of e-mail tutoring. He states,

When a tutor uses the conversational, exploratory approach in the verbal situation, she is encouraging the student to employ the aesthetic cognitive mode by raising conceptual connections which the student can work through. But the real question is that, when a tutor proffers these potential connections in writing, does that create a transgression of her ethical responsibility not to write the student’s paper for her? (1994, p. 7)

Concerns have also been voiced about the one-sided nature of the e-mail tutorial, a change that many scholars see as substantive and detrimental. In “The Asynchronous Online Writing Session: A Two-Way Stab in the Dark?” (2000), Joanna Castner expresses what many see as the primary problem with e-mail tutoring, the lack of a dialogic interchange between tutor and student. “Anyone who has consulted face-to-face,” explains Castner, “knows that dialog is necessary for the consultant and client to understand the assignment, for the consultant to understand the client’s questions, and for the client to understand the consultant’s responses” (p. 120). Michael Spooner agrees, noting that the typical online conference will result in “only one round of turn-taking: the student sends a text with a question, and the tutor replies, exit” (1994, p. 7).

Since e-mail consultations require little more of the student than dropping the paper off online, students are likely to avail themselves of the service, though there is no way of determining whether they actually use the advice they receive or even whether

they receive the advice before the paper is due. Andrea Ascuena and Michael Mattison (2006) report that during their center's first semester of e-mail tutoring there were only nine submissions, but the number jumped to 150 the next semester. Similarly, when Lady Falls Brown instituted an online writing center in 2000, the staff received far more submissions than they could read in the 24-hour turnaround time specified, and since online tutors were paid \$14.70 per hour, an additional strain was placed on the writing center budget (2000, p. 26). This problem becomes even more profound when one considers that e-mail consultations are generally more time consuming than face-to-face consultations (Kastman-Breuch & Racine, 2002; Rickly, 1998). A study conducted by Lee-Ann Kastman-Breuch and Sam Racine determined that the average online appointment took 93.7 minutes while scheduled face-to-face appointments averaged 54.9 minutes, and walk-in appointments averaged just 31.4 minutes.

It is a small wonder that e-mail tutorials take longer than face-to-face tutorials given that many writing center directors impress upon their tutors the need to act as a model for student writers. In "Reading, Writing, and the Role of the Online Tutor" (2006), Ted Remington stresses the importance of explicit and implicit modeling. Explicit modeling occurs when the tutor addresses a problem characteristic of the student's writing and then demonstrates the problems using an exaggerated example so that the problem is magnified to the point that the student can graphically see it. Implicit modeling assumes that the student writer will seek to emulate and appropriate the writing skills and techniques of the online tutor. Hence, tutors must be very careful in their written responses because "stylistic and grammatical sloppiness," according to Remington, "undercuts the tutor's ethos and sends conflicting messages to the student"

(p. 3). Writing center director Harry Denny, on the other hand, laments the inordinate amount of attention that instructors who receive copies of online tutorials place on spelling errors and errors in grammar. He ponders whether there are significant and valid differences between conventional writing and writing for e-mail and asks, “Can e-mail dialog be inviting, engaging and formally correct at the same time?” (2005, p. 3)

Questions such as these are frequent topics of debate on WCenter, the online listserv for writing center tutors and directors. There are no clear answers. It is clear, however, that asynchronous writing centers do meet the needs of colleges and universities with a geographically dispersed client base. E-mail commentaries can be effective tools for promoting reflective learning and metacognition, causing students to rethink, revise, and rewrite. However, writing center directors who implement asynchronous conferencing should anticipate a substantial increase in submissions that will necessitate increasing writing center personnel as well as the writing center’s budget.

Synchronous Writing Center Platforms: Chat

Chat conferences, unlike e-mail conferences, are synchronous, meaning that they take place in “real time” and involve a dialogic exchange between student and tutor requiring them to meet in cyberspace to discuss and sometimes view or share the document online. Student and tutor interact by typing questions and responses in a dialogue box. Chat more closely mirrors the dialogic exchange of face-to-face conferencing than e-mail consultation; however, chat, like e-mail, presents distinct challenges. The question of whether a tutor can be “engaging, inviting, and formally correct at the same time” is even more significant in chat than in e-mail (Denny, 2005, p. 3). Traditionally aged students who are well versed in chat room conventions and

abbreviations expect the same of their tutors, whereas older, nontraditional students may find such conventions and abbreviations confusing and unprofessional.

Dan Melzer, a writing center director and proponent of chat conferencing, feels strongly that establishing a friendly rapport requires using abbreviations and adopting an informal writing style that allows for the types of mistakes that typically can occur when working online, both in relation to grammar and spelling. He points out that long delays between a tutor's comment and a writer's response often indicate the writer is painstakingly crafting a response, checking for errors in spelling and grammar, and as a result, slowing and impeding conference pace. To avoid this, Melzer feels, students should be encouraged at the beginning of the conference to use abbreviations, acronyms, and emoticons and should be told "no one expects correct grammar in a chat room" (2005, p. 13). Insisting on grammatical correctness, according to Melzer, is "school-marmish" and increases the distance between student and tutor (2005, p. 12-13); however, a frequent complaint of businesses and organizations – both in the private and government sectors – is the unprofessional appearance and tone of their employees' e-mails. Telling students that errors in grammar are understandable and that the use of emoticons is appropriate in digital discourse may be detrimental to them in their professional lives.

While familiarity with chat rooms and the informal language and protocol used within them is common knowledge for most traditionally aged students and often a preferred mode of discourse (Marsh, 2005), nontraditional students often find both the discourse and chat platform alien and confusing. Shareen Grogan, Director of the Writing Centers at National University, is sensitive to this issue: "Many of our students have not

written a paper in 20 years, so they already feel insecure – we try not to add to that insecurity by forcing them to use a technology that might be scary, slow or in any way off-putting” (WCOonline transcript, June 20, 2008). Grogan’s concerns are shared by Mark Hall and Thia Wolf, who direct the writing center at California State University Chico. As with most directors who have instituted online tutoring, their goal in providing the service was to reach nontraditional students, “as well as those reentering college after a prolonged absence,” non-residential students who are unlikely to be on campus during the day when the conventional writing center is open (2003, p. 2). Even after a great deal of promotion, only a “handful” of such students took advantage of the synchronous chat service Hall and Wolf implemented (2003).

Nonetheless, as the general population continues to become increasingly savvy about technology and interested in social networking, as more colleges and universities go online (some even exclusively so), synchronous chat sessions have become commonplace both inside and outside the classroom. Writing centers, however, seem to have fallen behind in both chat and synchronous audio conferencing. According to the most recent Writing Center Research Project statistics, synchronous conferencing accounts for just 10% of online writing center conferences (Neaderhiser & Wolfe, 2009). This may be due in part to the success of e-mail conferencing programs. Writing center directors are understandably reluctant to abandon a conferencing platform that is both popular and convenient. Asynchronous conferencing can also be conducted without technology training and with very little technical support whereas synchronous conferencing, even chat, requires significant tutor training and technical support, support that is lacking at most colleges and universities (Neaderhiser & Wolfe, 2009).

Despite these obstacles, writing centers offering synchronous chat conferencing have increased in number, and chat protocols have been developed. Writing center theorists who have used and observed chat conferences, agree that, just as in face-to-face conferences, the tutor should establish a rapport, ask the student about his paper and his concerns, treat higher order concerns before lower order concerns, and keep the student in control of the conference (Ryan & Zimmerelli, 2010; Hewett & Ehmann, 2004; Shi & Morrow, 2006). Tutor responses should not dominate the chat conversation, and, if application sharing is used, the student should control the document, not the tutor. As in face-to-face conferencing, tutors can facilitate metacognition by asking proactive questions (Shi & Morrow, 2006; Hewett & Ehmann,2004; Hawisher, 1992; English, 2000). In sum, Leigh Ryan and Lisa Zimmerelli advise, “just as with face-to-face tutoring, the tutor’s ultimate focus should remain on helping the student to become a better writer rather than simply making the submitted writing more effective” (2010, p. 78). Tutors must resist the tendency to “simply edit” when responding by e-mail or chat (Ryan & Zimmerelli, 2010, p. 80).

This concern is significant since many chat platforms permit the student to print a transcript of the session. Any edits or suggestions that the tutor has made, whether global or textual, will be preserved, potentially raising concerns about plagiarism and honor code violations; however, in a study comparing e-mail with synchronous chat tutoring, Lee Honeycutt found that chat conference transcripts showed significantly fewer text specific suggestions than e-mail (2001). At Frostburg State University, instructor Terry Tannacito used chat sessions for electronic peer response in her professional writing class with positive results. One student had this to say about her chat session transcripts: “I

depend on the printout of the response session when I revise. If I didn't have it in front of me, I would forget half of what was said about my draft" (Tannacito, 2001). While highly prescriptive advice does not promote reflection and can lead to plagiarism, whether via e-mail or chat, a conference transcript that provokes thought encourages reflection and revision.

Synchronous Writing Center Platforms: Web Conferencing

Web conferencing applications and synchronous learning management systems (SMLS)⁵ offer the advantages of chat and add VoIP, allowing participants to talk naturally with one another. Session participants can also chat, share documents, manipulate texts, and record their sessions. This technology has been used commercially for decades, since business and industry have long recognized the economic savings of hosting meetings and training online. By using programs such as NetMeeting, Breeze, and WebEx, companies are able to save millions – even billions – of dollars on travel and lodging costs. Educational institutions such as Longwood University, the University of Alaska, and University of Phoenix use SMLSs such as Wimba, Breeze, and Elluminate to host synchronous online classes, enabling them to capture nontraditional and distance education students without sacrificing the Socratic method used in the traditional classrooms.

⁵ Synchronous Learning Management Systems are generally licensed to a company or educational institution and allow the licensee to host classes with up to 100 participants synchronously. Participants can hear the instructor and follow along with lectures that employ an interactive whiteboard, a PowerPoint presentation, or any other type of Microsoft office application. Participants can contribute to the class either through chat or through VoIP. In addition, these programs offer applications such as polling, break-out rooms, and the ability to archive and save sessions.

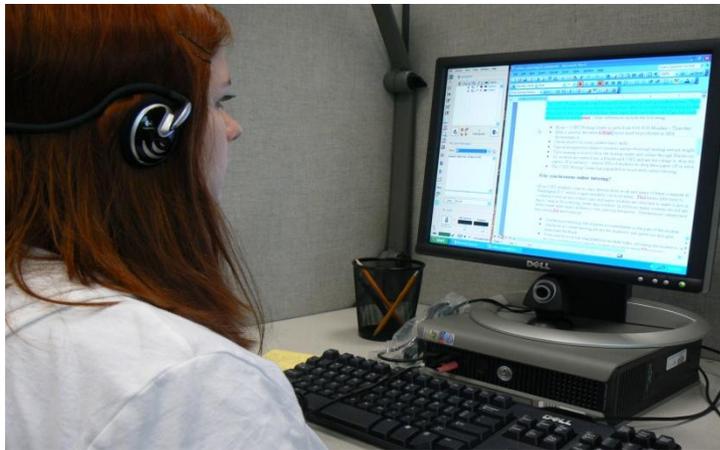


Figure 1: Synchronous conference using Elluminate.

Conferences hosted using a synchronous audio platform replicate the face-to-face conference more closely than any other online consulting option. Both tutor and student can talk to one another freely through a headset or built-in microphone; they can – if they so desire – see one another via video camera, share and make changes to the document, chat if there is a problem with the audio, and save the session (both audio and video) so that they can view it later.

The early precursor of this conference type, NetMeeting, did not archive conferences but provided essentially the same technologies as contemporary conferencing platforms: video, application sharing, chat, and audio via VoIP. The first writing center director to test this platform for writing center conferences, Doug Enders, began usability testing with NetMeeting in 2000, employing the whiteboard for document sharing and the chat feature for consultant client communication. (Enders did not use video or VoIP because microphones and cameras were too costly at that time.) While Enders considered the NetMeeting sessions a success, he felt they were no substitute for face-to-face consultations. He concluded that NetMeeting should only be used by students who are unable to attend a face-to-face session because of scheduling conflicts

or because of physical limitations. Enders found that, on the whole, synchronous sessions took longer to conduct than face-to-face sessions because of the technology, set up times, chat delays, and technical problems that occurred during the session – all of which were frustrating for tutors and students. Just one year later, in “Making Synchronous On-Line Tutorials Easier: Microsoft’s NetMeeting 3.1” (2001), Enders reported that he was using both video and audio during synchronous conferencing sessions since prices had come down substantially for web cameras and microphones (2001). This round of usability testing produced fewer technical problems and better overall results, according to Enders.

Commercial and government enterprises also began experimenting with and using NetMeeting to collaborate synchronously as early as 2001. The Government Accountability Office (GAO) still uses Microsoft’s NetMeeting to connect writing teams and analysts who are dispersed throughout the country and the globe (personal communication, November 24, 2008). However, most organizations and agencies have switched to subscription meeting services, such as WebEx, since NetMeeting directories are no longer active. NetMeeting also requires a static internet protocol (IP) address accessed through a cable modem. While GAO employees are required to use cable connections with stable IP addresses for work, most internet users today have an IP address that is assigned via their internet provider each time they log onto the internet. Connectivity issues are further complicated by firewalls and Ethernet (wireless) connections. Many users, for example, have a home network which links multiple computers through a wireless router. This has been a huge obstacle for online conferencing program providers; however, a number of platforms, such as WebEx, Wimba, Breeze, and Elluminate, are now able to provide, even to internet users on

Ethernet connections, VoIP, video, application sharing, chat, and numerous other services, such as online polling and web touring. These capabilities allow writing centers to conduct conferences in a manner that is similar to face-to-face conferences.

Despite the obvious dialogic advantage of synchronous VoIP conferencing, the latest National Writing Report found that “Real time voice technologies accounted for less than half of one percent of recorded consultations” (Neaderhiser & Wolfe, 2009). As with chat conferencing, this is due in part to a lack of support at the institutional level. Few writing centers have funding to afford a subscription conferencing service such as Elluminate or Breeze, and, while free online conferencing programs (such as Skype and Dim-Dim) offer similar platforms, they do not incorporate the firewalls or encryption that most colleges and universities require. In addition, these “free” services often subscribe users to online mailing lists and user groups without the user’s permission or knowledge.

In addition to the cost, the technology of synchronous online conferencing can be an obstacle. Though the technology is relatively easy to use, many people are still unfamiliar with it. In *Diffusion of Innovations* (1962), Everett Rogers discusses the resistance with which technological innovations are met by members of the general public. According to Rogers, people resist innovative technologies because they can be difficult and time consuming to learn. Writing center clients are naturally hesitant to invest time learning a new technology for an online session, especially since online users are more likely than face-to-face users to value convenience. If students must take time to learn a conferencing platform in order to participate in an online conference, they are less likely to meet online due to the added initial time expenditure. This may be why many

writing centers have reported starting synchronous conferencing only to abandon it because of low client usage (Marshall, 2005; Neaderhiser & Wolfe, 2009).

When writing center director Elizabeth Morely launched a synchronous online component to her face-to-face center, she reported that the semester ended in “mixed results: we only had 2 sessions and neither of those students wanted to work with Elluminate so we used email and telephone” (personal communication, May 15, 2008). Morely theorizes that nontraditional students, the very population she hoped to target through the service, were intimidated by the technology and were, therefore, less likely than their traditionally aged counterparts to use the service. Computer availability and internet access can also be a problem in providing online conferencing options. Under-represented students in particular may not have access to a personal computer, and even when they do have access, they are less likely to have a high-speed internet connection than their white counterparts.

There have, however, been some surprising success stories regarding synchronous online courses and conferences, even among student populations with limited computer resources. Elena Reyes, an instructor at Rio Grande Valley Community College, reports turning to Wimba, a synchronous online platform, when she noticed students in her face-to-face class sessions seemed to be losing interest in the course. Wimba, Reyes felt, might renew student interest. Despite a demographic of 90% Latino students, most of whom live near or below the poverty line and many of whom did not own a personal computer, Reyes’ reports that the students preferred her online classes and frequently accessed archived sessions: in fact, 100% of her students accessed recorded sessions during the three course component (2008). Could these students, 82% of whom speak

Spanish in the home, have found such archived sessions a significant learning tool? 92.3% of the students reported that they could learn course content as well if not better using Wimba. Given Reyes' findings, one wonders whether synchronous tutorials could not be equally successful.

In colleges and universities that have already been using a system such as Elluminate or Wimba to host online classes, students are already comfortable with, and, therefore, more willing to use, synchronous online technologies than students attending colleges and universities that do not host synchronous, online classes. At the University of Alaska at Fairbanks, traditional and nontraditional students, white as well as under-represented students, have taken readily to synchronous conferencing due to university-wide support and the large number of classes hosted online. Jamie Thurber, writing center director at the University of Alaska Fairbanks, has used Elluminate successfully to host writing conferences. He cautions, however, that just as in other types of conferences, students want the consultant to be an "editor" and "fix" their paper's problems; this tendency may be heightened in synchronous online conferences since the consultant can control and manipulate the actual document (2000). Just as in face-to-face or chat conferences, consultants can and should "redirect [students] to discuss higher order concerns" (Thurber, 2000, p. 155). Thurber's writing consultants page down through the document, stop at specific passages, and ask students to read aloud and self correct, something that is not possible in chat sessions. This technique, according to Thurber, visually and mentally engages students in their work and has led to "an increase in students finding and correcting their own errors" (2000, p. 156).

Similar to the University of Alaska, the University of Central Florida is part of a “large regional campus system” that boasts of extensive online offerings and serves a culturally diverse population (Carpenter, 2008, p. 1). Writing center director, Rusty Carpenter cautions, however, that diversity must not be defined strictly as a matter of race or gender; “practitioners must think more openly about diversity to include students with diverse needs – students with disabilities and students with obligations that take them away from the physical space of the university campus” (2008, p. 2). With this in mind, Carpenter began hosting synchronous online writing conferences in 2005. KnightOWL, the center’s online conferencing component, offers convenient evening hours for students who cannot conference during the day. The service was specifically designed for “students with families and children, working professionals, commuters, physically challenged students, and students who rely on alternative modes of transportation” (Carpenter, 2008, p. 3). KnightOWL offers the additional advantage of expanding services without expanding space on a campus where “physical space is at a premium” (Carpenter, 2007, p. 2).

Synchronous online conferencing programs such as KnightOWL allow the tutor and student not to only view the document but to manipulate it, as well. Consultants are able to point out patterns of error, ask students to read their work aloud, and oversee students as they self-correct their manuscripts. The interactive nature of the synchronous voice conference promotes recursive thought and reflection. In addition, synchronous conferencing programs, such as that employed by KnightOWL, permit participants to record their session. After the session, both consultant and student are automatically sent

an e-mail from the hosting service that contains a link to their recorded session (both audio and video are recorded).

Because of its dialogic nature, synchronous voice conferencing is collaborative and aligned with social constructionist learning theory. Just as in face-to-face conferencing, students are tutored through the “normal discourse” of a peer. Proponents of synchronous conferencing claim the interaction between consultant and student is highly reflective and collaborative since both participants are actively engaged with and focusing on the student’s writing. The study detailed in the following chapter will investigate that claim, as well as other claims related to online synchronous conferencing, using quantitative and qualitative research methodologies.

METHODOLOGY

This study was designed to determine whether synchronous online conferencing, employing VoIP is similar to or significantly different from face-to-face conferencing and whether the clients who use synchronous online conferencing share the same demographic profile as those who meet with a tutor face-to-face. This study took place at a the satellite campus of a traditional four-year liberal arts university; the satellite campus services nontraditional students and offers a bachelor's degree completion program as well as master's degree programs in business, education, and technology. The adult, nontraditional student body the satellite campus serves has a "consumer mindset": students expect the university to "provide services where and when they need them" (Mohr, 1998, p. 152). Shareen Grogan, whose writing center serves a similar client population, chose a synchronous online conferencing program to supplement face-to-face conferencing at the center she directs. A synchronous conferencing platform, according to Grogan, enables tutors and students to meet in "the most natural way possible" in a "highly interactive and democratic" virtual space (2008, p. 6). Such claims abound; however, the effectiveness of synchronous VoIP conferencing is largely anecdotal and has not been systematically studied (Abrenhoerster, 2002; Hobson, 1998).

The research presented here details the implementation of a synchronous online conferencing service as well as the evaluation of synchronous writing conferences hosted through that service via quantitative and qualitative measurements. This chapter details the study's development including funding, platform selection, resistance, and implementation; it also describes the study's methodology including null and alternative hypotheses, quantitative measures, qualitative measures, and data evaluation.

Funding and Web Conferencing Platform Selection

The genesis for this study was a presentation given by University of Maryland undergraduate student, David Dobolyi, at the 2006 Mid-Atlantic Writing Center Association Conference. Dobolyi demonstrated Microsoft's NetMeeting, proclaiming it "the most promising" of current web conferencing tools in that it simulates "traditional face-to-face tutoring without the need for proximity." NetMeeting enabled students to meet with a tutor synchronously, send live video, application share, chat, and speak using VoIP. NetMeeting had the additional benefit of being free and pre-installed on computers using Windows operating systems. It was – and still is – an excellent application for individuals using computers that are hard-wired with a stable IP address. This application does not work, however, with computers using a wireless internet connection. In 2006, when this study began, the migration to wireless local area networks (LANS) was well underway, with many at-home computer users linking several wireless computers to one hard-wired computer connected via a modem to an internet service provider. Thus, NetMeeting was quickly dismissed as an option.

The host university's instructional technology (IT) team was approached for assistance in selecting a synchronous platform but was unable to assist due to time and budget restraints. As Ray Wallace notes in "Random Memories of the Wired Writing Center" (1998), writing centers frequently are given little technical support for online services. Generally, the writing center director creates and implements all the center's online services and ends up "ensuring that computers are running, faculty are trained on these computers, and the software is up to date" (p. 168). In a study of online writing centers, 90% of those individuals responsible for building and maintaining the online

center services – usually the writing center director – stated that they lacked the necessary training, equipment, and support to effectively develop and maintain the center (Shadle, 2000). According to James Inman, writing center directors, in addition to other duties, end up being the “go to” person for technology when they implement an online writing center (2004, p. 218). This situation has not changed.

In addition to lacking IT support for online services, writing centers often lack financial support as well: three-fourths of writing centers hosting online services report they receive no additional funding for those services (Neaderhiser & Wolfe, 2009). Funding was provided for this study through three internal grants and one external grant from the Association of Adult Continuing Higher Education. Internal grants were given under the stipulation that a simultaneous proof-of-concept study testing the synchronous conferencing platform for use in hosting synchronous online classes also be conducted. Thus, completing this study required conducting two studies simultaneously while teaching and directing a writing center. (I mention this not as a complaint, but to confirm the observations of Mike Shadle, Stephen Neaderhiser, Joanna Wolfe, and James Inman: often writing center directors implementing new technologies take on additional roles for which they should be prepared.) These grants enabled the writing center to test a number of subscription synchronous conferencing platforms as well as synchronous learning management systems (SLMS)⁶ and to develop a pilot synchronous online conferencing program using one of these SLMS.

⁶ A synchronous learning management system (SLMS) has all the feature of a synchronous online conferencing system plus additional features that allow for the hosting of synchronous online classrooms. Additional features may include hand-raising icons, polling, breakout rooms (these allow for a meeting within a meeting; students are organized in groups and sent to virtual private group discussion rooms), and archival abilities that allow the content of an entire synchronous course to be archived and used again.

A review of online conferencing platforms and SLMS scholarship revealed that the premier platforms at that time were all SLMS: Breeze (now Adobe Connect), Horizon-Wimba (now Wimba) Web Ex, and Elluminate (Schullo, 2006; Shi & Morrow, 2006; UNC, 2006). Two studies were particularly helpful in narrowing the field of options: a study conducted across sixteen University of North Carolina (UNC) campuses (UNC, 2006) and a study conducted at Syracuse University and sponsored by the National Science Foundation (Cogburn & Kurup, 2006). Both studies solicited instructors to use voluntarily and test SLMS in the classroom. The UNC study developed a detailed rubric containing over 200 elements to assess ease-of-use, instructional value, accessibility, and administrative functions on multiple SLMS platforms (2006). The UNC study gave a slight edge to Elluminate because it “currently offers the most universal access to diverse computer environments and user needs” (2006, p. 7). The study sponsored by the National Science Foundation tested 40 SLMS in the classroom environment and concluded that Elluminate, Centra, and Breeze had the “richest set of features” (Cogburn & Kurup, 2006).

A smaller study conducted by the University of Wisconsin System comparing Breeze and Elluminate found the two systems roughly equal in capability; however, Breeze was determined to have a “complicated interface” that led to a “steep learning curve” (Schullo, 2006). This study ranked Elluminate higher than Breeze in ease-of-use and in its ability to support users on all operating systems, including Mac, and all internet connections, including dial-up: Breeze did not support Apple users or dial-up connections. Breeze’s administrative interface did, however, out-perform Elluminate’s, which users found “cumbersome” (Schullo, 2006, p. 4).

An additional study, published in *Educause*, polled twenty-three California Community College instructors who were using Horizon-Wimba in their classrooms. The study sought to determine which program features were most helpful in hosting online class sessions (Shi & Morrow, 2006). The features that instructors ranked most highly were those that allowed interaction and collaboration between teacher and student: polling, text chat, and application sharing (Shi & Morrow, 2006). While audio appeared in the evaluated feature set, it was not ranked as a top feature by instructors. This may be due to the unreliable quality of Horizon-Wimba's VoIP.

A similar study ranking the helpfulness of SLMS features for use in online conferencing has not been conducted. In the absence of such a study, the writing center director and staff discussed the feature set of several SLMS in relation to synchronous conferencing. We sought features consistent with social constructionist epistemology and its attendant emphasis on dialogue, interaction, and collaboration. The following table ranks common synchronous learning management system features as either "highly desirable," "very desirable," or "desirable." (Not all systems offer all the features that are assessed.) "Highly desirable" features can be defined as those features deemed most essential for conducting collaborative conferences online. "Very desirable" features provide affordances that would clearly enhance the online conferencing experience, but are not essential to it. "Desirable" features are affordances that are more useful in online workshops and classes than in online conferencing sessions.

Table 1: Synchronous online features.

Feature	Highly Desirable	Very Desirable	Desirable
VoIP	X		
Text Chat	X		
Multiple Simultaneous Talk		X	
Video		X	
Guided Web Browsing		X	
Interactive Whiteboard		X	
PowerPoint Presentation			X
Polling and Quizzing			X
Multimedia Presentation			X
Application Sharing	X		
Emoticons			X
Breakout Rooms			X
Record and playback		X	
Password Secured		X	
Cross Platform	X		

Cross Platform Capability

A critical feature of any web conferencing system is accessibility. The ideal web conferencing program should permit both PC and Mac users access. In addition, the conferencing program should work well with computers employing hard-wired or wireless internet connections, and with a variety of internet connections including cable,

DSL, satellite, and dial-up. A system's feature set may be robust: however, if students are unable to access the system, the system and its feature set are useless.

Voice over Internet Protocol

VoIP is a highly desirable, if not essential, SLMS feature since it allows session participants to speak to one another through their computer rather than by phone. This capability is significant since many home computers may be located in a room where no phone is available. In addition, some telephone users have given up their land lines altogether, opting to use only their cell phones. A phone conference for these users could prove to be expensive.

Text Chat

Chat is an essential back-up to VoIP. Audio problems are experienced more frequently in online synchronous conferencing than any other technical problem. Some audio problems originate with the user: users may have difficulty setting up their audio or simply enter a conference without the proper equipment. Using a computer's built-in microphone and speakers rather than an audio headset can cause a noticeable, and often distracting, echo. Internet access speeds can also be a source of audio problems. Computers accessing the internet at different rates of speed can create a delay between when an audio signal is sent and when it is received. While most programs try to compensate for differences in internet connection speeds by speeding up or slowing down the audio accordingly, this significantly distorts the voices of the participants, particularly if the difference in access speeds is substantial. When VoIP problems become distracting to session participants, or when VoIP fails to work altogether, chat allows the conference to continue collaboratively.

Application Sharing

Application sharing enables all session participants to see and manipulate the document, an essential feature for both tutor and student. The ability to scroll to various places in the document, edit text, and move paragraphs can, it is theorized (Griffin, 2008; Grogan, 2008), create a dynamic, collaborative conference in which the student is fully focused on the document.

Video

Video was initially felt to be essential since one of the most frequent concerns voiced by critics of online conferences is the inability of tutors to read the body language of the student(s) with whom she is conferencing (Mobracher, 2007; Castner, 2000); however, two-way video takes a substantial amount of bandwidth, making this feature virtually inaccessible for dial-up users and slowing application sharing for all participants, regardless of internet connection type: cable, DSL, satellite, or dial-up (Shewmake & Lambert, 2000; Thurber, 2000). In addition, at the time this study was launched, only Breeze had picture-in-picture video enabling tutor and student to see each other. Horizon-Wimba and Elluminate both offered one-way video broadcasting, creating inequity between the tutor and student. In order for the tutor to “see” the student, the tutor could not broadcast video. The tutor remained anonymous while the student was exposed, promoting a power imbalance and creating a hierarchical structure.

Simultaneous Talk

Simultaneous talk and session recording were deemed very desirable though not essential. Simultaneous talk allows up to six conference participants to speak without having to pass a virtual microphone back and forth. Though platforms such as

Elluminate, Breeze, and Horizon-Wimba use the familiar icon of a microphone to denote the talk feature, learning to click the icon on when talking and off when listening is far from natural. Users who are new to synchronous conferencing employing VoIP frequently forget to click off their microphone, inadvertently blocking other conference participants from speaking. Session participants can quickly become flustered and frustrated. Simultaneous talk more closely replicates the face-to-face conference, allowing both consultant and client to speak naturally without passing a virtual microphone.

Session Recording

Session recording saves the entire conference, video and audio. After the conference, all participants are sent an automated e-mail with a link to the recorded session. Since recorded sessions are stored on the synchronous learning management system's server, this feature can be expensive; however, session recording enables participants to return to the session, fostering metacognition through "reflection on action" (Schön, 1998). As Eric Crump observes, the ability to have a transcript or recording of a session is a "small but possibly significant thing" (2003, p. 348). Session recordings allow tutors to review their conferencing technique and permit students to revisit their conference.

Additional Features

Additional features such as the ability to present PowerPoints, the use of an interactive whiteboard, and the ability to poll session participants would be helpful for online workshops, but are unnecessary for individual conferencing. Guided web

browsing, though not essential, can be useful when a student is struggling with research or is unaware of the online databases available through the university's library website.

Synchronous Conferencing Platform Demonstrations

WebEx, Horizon-Wimba, Elluminate, and Breeze were contacted for pricing information and demonstrations. WebEx, the leader in business and industry, proved to be too expensive and was subsequently dropped from consideration. Horizon-Wimba, Elluminate, and Breeze had the features deemed essential for online conferencing, and all were willing to negotiate a reduced rate for a one-year trial period since this study was linked with a university-wide proof-of-concept study. Demonstrations employing identical conference protocols were set up with all three vendors. Each demonstration was hosted by a company representative, usually a trainer. Three writing center participants, the director and two tutors, used library computers to log into demonstration sessions. The results of those sessions follow:

Horizon-Wimba

The session was led by a Horizon-Wimba trainer hosting the session from her home. Difficulties during the session included audio problems (echo and inability to hear) and substantial lag times when downloading documents and PowerPoints. Users were frequently dropped from the session and had to log on to rejoin the session. The trainer stressed the importance of having an 800 number that participants could use in place of VoIP should the need arise.

Breeze

The trainer hosting the initial session was unable to get VoIP to function and asked us to reschedule the session with a veteran trainer. During the second session, the

VoIP was clear. A PowerPoint was also shown during the second session; however, application sharing of a Word document was not demonstrated. Later it was discovered that Breeze employs Flash which allows PowerPoint application sharing but does not permit application sharing of Word documents. In order for participants to view a Word document in Breeze, the document first has to be converted to a PDF file. At the time this demonstration took place, Breeze did not employ desktop sharing.

Illuminate

The writing center director and members of the writing center staff attended one of the weekly demonstration sessions hosted by Illuminate. This session had approximately 20 participants from multiple universities. During the session, VoIP was used along with chat. Features such as web browsing, break-out rooms, application sharing, and polling were also demonstrated. Guests were given moderator privileges enabling them to use the whiteboard, as well as share and download documents. Session participants were able to download and share their documents without having had any previous training other than that given during the session.

Usability Testing

A decision was made not to pursue Horizon-Wimba as a platform due to the significant connection problems encountered during the training session. Illuminate and Breeze were both selected for additional testing. During a two-week trial period, the writing center director and writing center staff members conducted numerous mock tutorials. Care was taken to test Illuminate and Breeze using different types of internet connections including wireless, cable, DSL, satellite, and dial-up. All usability testing participants tested the system taking on the role of tutor and of student.

Breeze

Breeze uses a system that is unfamiliar to most PC users. Applications are hosted in “pods.” The terminology itself is off-putting and alien to new users, and usability testing participants agreed with the University of Wisconsin study that determined Breeze’s learning curve to be “steep” (Schullo, 2006). Video worked well but slowed down application sharing considerably. When viewing Word documents, users were unable to find a way of broadcasting video that did not interfere with the document view. While PowerPoints could be easily shared, Word documents had to be converted to PDF files, cancelling out the possibility of manipulating the document during the session. An alternative was cutting and pasting word documents directly into the whiteboard; however, this was time consuming and difficult given the length of graduate papers. In addition, Breeze did not work with dial-up users and did not offer training other than an operation manual and asynchronous Flash tutorials.

Illuminate

Illuminate uses a graphical user interface (GUI) that is similar to that used by Microsoft Windows, enabling study participants to quickly learn hosting techniques and application sharing. In addition, Illuminate uses Java rather than Flash, which allows the moderator and participant to application share Word documents as well as PowerPoints without sharing the computer desktop. Both the consultant and client can manipulate, change, and save the text. Illuminate, unlike Breeze, did not offer simultaneous video broadcasting, meaning that either the tutor could stream video to the student or the student could stream video to the tutor. One video capability that Illuminate had which

Breeze did not have the ability to change resolution, enabling video broadcast to and from dial-up users.

The lengthy initial download time for Elluminate dial-up users could be substantial, twenty minutes or more, but once the platform was downloaded, dial-up users could use video, VoIP and application sharing. The complicated administrative interface used to register moderators and to schedule appointments was a disadvantage, though this was off-set by Elluminate's training. Unlike Breeze, Elluminate offers synchronous online training sessions multiple times per week. These sessions are free-of-charge and cover a variety of topics from hosting meetings to using advanced features including application sharing, break-out rooms, and class polling.

Usability Testing Results

Advocates of synchronous online tutoring, Jake Shewmake and Jason Lambert (2000), consider application sharing the most essential synchronous platform feature for hosting online conferences. This affordance creates a visual focus on the text and enables tutor and student to work and learn collaboratively. Elluminate enables application sharing of all Microsoft Office documents without sharing the computer desktop. It also employs VoIP, permitting up to four participants to talk without having to share a virtual microphone or clicking a function key. This produces a relatively natural audio interface that promotes dialogic exchange, enabling tutors and students to ask questions and receive responses.

Though Breeze, like Elluminate, enabled simultaneous talk via VoIP, it was lacking in many areas: Word applications could be viewed but not shared, dial-up users as well as Mac users could not use the platform, and technical support was deficient,

especially in regard to training. Elluminate, on the other hand, supported users with dial-up and with operating systems other than Windows, enabled application sharing of Word documents, and provided excellent user support. Video was the only area in which Breeze out-performed Elluminate by allowing both tutor and student to broadcast simultaneously; however, bandwidth issues created by video did adversely affect application sharing. Given these results, the decision was made to use Elluminate for this study.

Research Methods

The suggestions of writing center researchers – Greg Abrenhoerster and Jon Brammer (2002), Stuart Blythe (1998), Pamela Childers (2006), and Eric Hobson (1992), – were followed in the design of this study. In specific, this study collects data from students using synchronous conferencing under actual circumstances. Synchronous online conferencing was offered as a conferencing option to all students using the satellite writing center. Data was collected from these students over the course of two years through a modified writing center survey. (Student surveys had been in existence since the center’s inception). The survey instrument was augmented by qualitative methodologies including write-in responses, online tutor session logs, and student and tutor interviews. The approach of the study was scientific using null and alternative hypotheses⁷ to determine whether statistically significant differences exist between face-to-face and online consultations including student demographics and perceived effectiveness.

⁷ Simply stated null hypotheses posit that a statistically significant difference does not occur between the sets being examined while alternative hypotheses posit that a statistically significant difference does occur. Most scientific studies employ both null and alternative hypotheses.

Research Questions Investigated

The following research questions were investigated for this study:

1. Are there significant demographic differences between the face-to-face clients and the online clients?
2. Are there significant differences in the pre-conference preparation of face-to-face and online clients?
3. Do users of the face-to-face and online service seek help with similar or different writing problems?
4. How do face-to-face and online users perceive their conferencing experience?
5. Does the method of conferencing – face-to-face or online – affect the likelihood of a client choosing to conference with a writing center tutor in the future?
6. Why do writing center clients choose to use the online service?
7. Will technical problems experienced during an online session deter clients from conferencing with a writing center online again?

To answer these questions, quantitative as well as qualitative methods were used, including a client survey, interviews with tutors and online clients, tutor session logs and reflective writing. The survey employed nominal, ordinal question, and free form questions, allowing for write-in responses.

Null and Alternative Hypotheses

Seven null and alternative hypotheses were then developed in accordance with the study's research questions:

1. Face-to-face and online client demographics.

H₀: There are no significant differences in face-to-face client demographics and online client demographics (educational program, gender, age, ethnicity, distance, household status, and technology proficiency).

H₁: There are significant differences in face-to-face client demographics and online client demographics (educational program, gender, age, ethnicity, distance, household status, and technology proficiency).

2. Face-to-face and online client pre-conference preparation.

H₀: There are no significant differences in the pre-conference preparation of face-to-face and online clients.

H₁: There are significant differences in the pre-conference preparation of face-to-face and online clients.

3. Help that face-to-face and online clients seek.

H₀: There is no discernable difference in the type of help students seek when meeting face-to-face or meeting online (higher order concerns such as brainstorming, topic development, organization, transitions; and lower order concerns such as grammar, spelling, proofreading, and documentation).

H₁: There is a discernable difference in the type of help students seek when meeting face-to-face or meeting online (higher order concerns such as brainstorming, topic

development, organization, transitions; and lower order concerns such as grammar, spelling, proofreading, and documentation).

4. Conference perceptions of face-to-face and online clients.

H_0 : There are no significant differences in how face-to-face clients and online clients perceive their conferences (overall successfulness of conference including interactions and perception of the tutor's communication skills, helpfulness, and knowledge as well as the perceived effectiveness of the conference in relation to paper improvement, writing skills improvement, and overall successfulness of conference).

H_1 : There are significant differences in how face-to-face clients and online clients perceive their conferences (overall successfulness of conference including interactions and perception of the tutor's communication skills, helpfulness, and knowledge as well as the perceived effectiveness of the conference in relation to paper improvement, writing skills improvement, and overall successfulness of conference).

5. Likelihood of face-to-face and online conference participants to return for a future conference.

H_0 : There is no significant difference in the likelihood that face-to-face writing center clients and online clients will seek writing center assistance for future visits.

H_1 : There is a significant difference in the likelihood that face-to-face and online clients will seek writing center assistance for future visits.

6. Reasons clients meet online rather than face-to-face.

H_0 : There are no discernable reasons that clients choose to meet online rather than face-to-face (inability to come to center, child care difficulties, travel for work, center hours, comfort level, online preference, and overall convenience).

H₁: There are discernable reasons that clients choose to meet online rather than face-to-face (inability to come to center, child care difficulties, travel for work, center hours, comfort level, online preference, and overall convenience).

7. Likelihood of technical problems deterring clients from future online sessions.

H₀: There is no significant difference in the likelihood that technical problems that occur during an online session will deter clients from meeting again with a writing center consultant online.

H₁: There is a significant difference in the likelihood that technical problems that occur during an online session will deter clients from meeting again with a writing center consultant online.

Data Collection and Quantitative Instruments

A survey instrument was sent to writing center clients to assess face-to-face and online client demographics, affordances used during online sessions, and perceptions of face-to-face and online conferencing. The participant survey served two purposes, the first being the collection of data for the writing center's annual report and the second being the collection of data for this research study. In years prior to the implementation of this study, writing center clients were sent satisfaction surveys on a yearly basis. A decision was made to combine the annual survey with the research study survey to lessen the burden on the student: two surveys would, in all probability, lead to survey fatigue and a reduced response rate. The final combined survey was approved by the Institutional Review Boards (IRB) at the University of Maryland and at the host institution university. In compliance with IRB regulations, clients were asked at the conclusion of the survey whether they were over 18 and wished to participate in the research study. Clients were

assured that participation in the research study was completely voluntary, that they could participate in the survey without their feedback becoming part of the study, and that their ability to access writing center services would be in no way diminished should they decide not to participate in the research study.

Confidence Level

The confidence level for this study is 95, indicating an acceptable level of confidence.

Types of Scales Used

Scales are defined as any series of items that are arranged progressively according to the value of the magnitude. The purpose of scaling for this research was to represent quantitatively the demographic characteristics of face-to-face clients, conference preparedness of face-to-face and online clients, characteristics of face-to-face and online conferences, perceptions of client/tutor interactions in face-to-face and online conferences, and the perceived effectiveness of face-to-face and online conferences. Two types of scales were used, one employing nominal variables and the other employing ordinal variables.

Nominal Variables. These variable codes indicate a difference in category, class, or kind. Nominal variables are, as the label implies, named variables. For example, demographic characteristics such as gender, sex, and ethnicity are nominal variables. They are each assigned a numeric value and are then coded into the database.

Ordinal Variables. Ordinal variables, like nominal variables, name categories, but they also allow categories to be ranked according to assigned designations. For example, survey participants may rank on a scale of one to five their perception of a

conference's successfulness, with one indicating an unsuccessful conference and five indicating a very successful conference.

Survey Instrument

After the survey instrument was designed, but before its launch and IRB review, the survey was sent to writing center scholars Leigh Ryan and James Inman for their input. Their suggestions were incorporated into the final survey. The survey in its final form was sent for approval to the Institutional Review Boards of both universities involved, the University of Maryland and the host institution university, as were the other research materials employed in this study. Both institutions approved the survey invitation, the survey instrument, and client interview questions. All writing center clients received an invitation to participate in the survey containing an embedded survey link.

Timing of survey distribution is significant and can impact the outcome of a survey. In an empirical study designed to determine whether there is a statistically significant correlation between the timing of a conference survey and the student's perception of the writing conference, Julie Morrison, a psychology professor, and writing center director Jean-Paul Nadeau (2003), distributed writing center client satisfaction surveys at three different times: immediately after the conference, immediately after papers had been returned, and at the end of the academic year. Surveys completed in the writing center immediately after the conference were strongly positive. Surveys completed immediately after papers were returned showed a statistically significant drop in satisfaction ratings among all students, even those who had received an "A" on their work. Morrison and Nadeau believe that this is due to a "self serving bias" in which

individuals credit themselves for success and blame other individuals rather than themselves for failure. Surveys received at the end of the academic year tended to be more positive than those surveys received immediately after papers were returned, but were slightly less positive than those completed immediately after the conference.

Though a year-end survey was not viable for this study as it would have substantially lessened the accumulation of collected data, care was taken to establish a timing regimen that would lessen student response bias. It was determined that, to avoid a positive student bias, survey distribution should not occur immediately after the conference, and, to avoid a negative student bias, surveys should not be distributed after papers were returned. Since the brick-and-mortar writing center at the host institution closes on Thursday evenings, Mondays were determined to be the best day to send student surveys. Distributing surveys on Monday would insure that for the vast majority of students several days would have elapsed since their conference; however, it would be unlikely that their paper had been returned by their instructor.

Survey invitations and survey links were sent through Zarca, an online survey platform. Zarca, unlike free online survey services such as Survey Monkey, permits the survey designer to develop every aspect of the survey including the number and type of questions, the wording of the survey invitation, and the look and feel of the survey. Through Zarca, all writing center clients were sent an invitation to take part in the survey approximately three days to one week after their writing conference. The survey branched at question 11: “Did you meet with a writing center consultant face-to-face or online?” Students who answered in the affirmative were taken to a page of questions asking specific details about their online conference. Students who answered in the

negative were immediately taken to the final page of the survey. The survey contained 28 questions with 56 variables. Questions assessed demographic characteristics, participant preparedness, online conference characteristics, and the perceived effectiveness of conferences.

Sampling and Participants

Convenience sampling was undertaken for this study due to its nature: online conferences require an online survey instrument. The population surveyed was a subset of students attending the traditional university's satellite campus, which serves a predominantly nontraditional student population. There are no residential students on this campus. Degree programs include a Bachelor of Professional Studies (BPS), Master of Business Administration (MBA), Master of Information Management Systems (MIMS), and a Master of Education (MEd); several professional certificate programs are also offered.

Non-Response Error. Non-response errors result from either a student's refusal to participate in the survey, a student not receiving or opening the invitation and survey instrument, or an incorrect e-mail address. Thus, the sample may represent the survey population less than perfectly.

Response Rate. Since one survey question asked the respondent to identify the tutor with whom she had conferenced, and the tutor population changed over the course of the study, four Zarca surveys were distributed during the study; all with identical questions barring the tutor identification question. Zarca survey response rates recorded by the survey platform were as follows: Survey One, 27.7 %; Survey 2, 15.5 %; Survey Three, 25.8 %; and Survey Four, 28.2 %. Surveys were coded and merged using SPSS,

and incomplete surveys were eliminated from the database, yielding a total of 279 surveys with a response rate of 22.01 percent. Of the 279 surveys, 189 participants reported meeting face-to-face while 90 reported meeting online. This is similar to the actual distribution of conferences as determined by writing center conference report forms: 73 percent face-to-face and 27 percent online; hence, the online participants do have a slightly greater representation in the survey than do their face-to-face counterparts.

Data Analysis

Reliability of the survey instrument. A Cronbach's alpha analysis was performed on all scaled survey questions as a test of reliability. Survey question 10, which employed a Likert scale asking students to assess their degree of technical proficiency, failed to meet the accepted value standard of .7 and had a value lower than .3. Values lower than .3 may indicate that the item is measuring something different from other scaled questions (Pallant, p. 87). In this case, the scaled question was, in fact, not measuring student satisfaction as were the other scaled questions in the survey; rather it was measuring student's technical proficiency as perceived by the student. For that reason, the question was dropped from Cronbach analysis. All other scaled questions obtained a value higher than .7. The corrected item total correlation for this survey is .92, indicating a high degree of reliability.

Descriptive Statistics. Data analysis was carried out to determine demographics and to test the study's hypotheses. Statistical tests were chosen based on their degree of accuracy in relation to the data collected and the type of analysis sought. Data are analyzed using Chi-square, T tests, ANOVA, and Krusal Wallis tests set at a confidence level of 95%.

Data Collection and Qualitative Research

Though the primary focus of this study is quantitative research, qualitative methodologies were also employed to provide additional insight into client usage and platform choice, face-to-face versus online conferencing. The client survey instrument used in this study gave respondents opportunities to write in responses and to provide additional comments of their choosing at the close of the survey. Though tutors did not participate in the quantitative survey that forms the basis of this research, the focus of the study being online client demographics and client conference perceptions, tutors did record their observations of individual online conferencing sessions using post-session conference logs hosted on Zarca. Unlike the client survey instrument, tutors accessed the session-online conference log immediately after having conducted an online session. This allowed tutors to record their impressions and observations while they were still fresh. All tutors conducting online conferences also participated in interviews as did eight online conference participants. The data collected through these qualitative methods will be incorporated into the discussion of the client survey results.

Launching the Pilot Study

The writing center began offering online tutoring in November 2007 for what was to be a one-year study ending in November 2008. During the fall 2007 semester, the writing center hosted just one session. During the spring of 2008, the number of online conferences was still negligible, with only nine online sessions having been hosted. The sparse use of the synchronous conferencing service caused us to question whether such a service was necessary or even desirable. Seeking the advice of writing center directors involved in similar endeavors, I came in contact with Elizabeth Morley (2005), the

director of Writers Workshop at University of Illinois at Urbana-Champaign who was also attempting to launch a synchronous online conferencing component to supplement face-to-face conferencing. Her writing center's experience was strikingly similar to ours.

In an e-mail she wrote,

. . . our first semester of offering Elluminate tutoring sessions to select distance classes has ended – with mixed results. We only had 2 sessions and neither of those students wanted to work with Elluminate so we used e-mail and a telephone. . . we don't consider the experiment a waste. One important lesson was that the population we were targeting – distance graduate classes with mostly working professionals – are often not tech-savvy and also need more preparation as to the nature of the tutoring session. That may mean that they are so busy they need to be sure the hour will be worthwhile.

While Morley's observations have been corroborated by many researchers, who view nontraditional student populations as presenting "additional problems" (Shadle, 2000, p. 9), other factors may have also been at work.

In *Computers and Writing* (2004), James Inman warns directors not only to be flexible about their protocols but also to be patient and "allow plenty of time" when launching an online service (p. 288). In "Importance of Innovation: Diffusion Theory and Technological Progress in Writing Centers," Inman associates the adoption of synchronous conferencing platforms with Everett Rogers' diffusion theory. In *Diffusion of Innovations* (1962), Rogers defines diffusion as "the process by which an innovation is communicated through channels over time among members of a social system" (Rogers,

p. 5). In this instance, the new technology, synchronous online audio conferencing, is being communicated through a distinct social system subset: nontraditional students. These students are more likely than their traditionally aged counterparts to be digital immigrants, who, as a rule, demonstrate significant resistance to new technologies.

The adoption of any new technology, according to Inman, moves through specific stages: early adopters, early majority, late majority, and laggards (2000). For any new technology to be successful, reaching the final stages of adoption, the new technology or innovation must be seen as “consistent with existing values, past experiences, and the needs of potential adopters” (Rogers, p. 15). In this case, the conferencing technology must be consistent with writing center pedagogy and praxis and with the student’s perception of a writing conference, a perception that is often based on previous face-to-face writing center conferencing experiences. The technology must be perceived as user-friendly and as an improvement, particularly in relation to convenience, over existing technologies and protocols.

Even if an innovation is user-friendly and is perceived as an improvement, adoption rates are often painfully slow. Inman cautions that writing center directors launching online services should “allow weeks or even months” to launch the service, that they should anticipate problems, and “avoid being defensive” (2004, p. 287). Directors would also do well to “regard any decisions as subject to future considerations, rather than thinking of them as permanent” (Inman, 2004, p. 288). Following this advice, I worked with the writing center staff to identify factors that could be impeding the growth of the online service. The results are as follows:

1. Tutors were resistant to hosting online conferencing sessions. Writing center tutors tend to be devoted to face-to-face conferencing because they have seen its positive benefit firsthand and cannot imagine any online service providing similar results.⁸
2. The nontraditional “digital immigrant” population of students the center serves was reluctant to try the service, thinking that it might be difficult for them to learn. Dial-up users were also apprehensive, having previously experienced problems with e-mail and Blackboard related to the slow speed of their internet connection.
3. Online appointments were offered only when the brick-and-mortar center was closed since this service was seen as an extension of the existing face-to-face service.
4. Students were asked to attend a one-hour synchronous participant training session and watch a brief video that could be accessed either through the writing center’s website or the writing center’s Blackboard site before their conference.
5. Headsets for online conferencing could be checked out from the library; however, they had to be returned within three days.
6. Advertising of the synchronous online service was minimal and ineffective.

⁸ Not only tutors who are resistant. Stephen Neaderhiser and Joanna Wolfe report that a bias against online tutoring as well as a strong resistance to online tutoring was clearly evident in many responses to the 2006 Writing Center Research Project survey. One writing center director, in response to questions about online centers repeatedly responded, “An online writing center isn’t really a center, is it?” (2009, p. 66)

Actions Taken to Increase Usage

As a result of this analysis, several actions were taken. Meetings were held with writing center tutors to determine the source(s) of their resistance. While tutors were reluctant to host online sessions because they felt that the collaborative interaction afforded by a face-to-face conference could not be replicated online, they were also reluctant to venture online because they feared that a technical problem might arise during the session which they would be unable to resolve. A new protocol was developed that allowed tutors to host their first synchronous conferencing sessions with actual writing center clients from within the writing center where help would be readily available should a problem occur. When a tutor began hosting sessions from off-site, the writing center director joined the sessions as a co-moderator until the tutor felt comfortable hosting the session alone. Tutors determined when they were ready to host off-site sessions unaided.

To hasten the adoption of the synchronous conferencing service by writing center clients, tutors ended their face-to-face session by informing students about the synchronous conferencing service, stressing its convenience. In addition, an aggressive promotional campaign was waged through fliers, through the writing center's website, and through the writing center's Blackboard site. Monies from the ACHE grant were used to purchase 100 inexpensive headsets that were given free-of-charge to the first fifty users of the service. The rental period for headsets was also extended from three-days to one-week, allowing students who were taking only one night course to use the service without having to make a separate trip back to campus to return their headset.

The student training requirement was determined to be the biggest impediment to the successful adoption of synchronous conferencing technology. The training session and video made users reluctant to use the service: many nontraditional students who were already apprehensive about using the service became more so when they heard training was necessary. They typically decided before attending the session or viewing the video that the technology would be too difficult for them to learn. Timothy Garrand, an expert on multimedia design, succinctly sums up this issue, “If it takes the user too long to get the information they need to perform the transaction, they simply won’t do it” (2006, p. 100). Writing center clients, particularly those who would be most likely to use synchronous conferencing – those clients trying to save time – felt that training to meet synchronously was cumbersome and time consuming; hence, they simply elected to meet face-to-face rather than online. To overcome this obstacle, the student training requirement was abandoned. Students were advised that no training was necessary: a tutor would meet them online and walk them through the set-up process. The scheduling protocol was changed as well. Students scheduling online appointments were asked to give a phone number at which they could be reached before and during the session. They were also sent an e-mail with a link to their online session and a brief explanation of what to expect once the link was accessed. Tutors were instructed to call students who were more than five minutes late for their online conference to offer them assistance getting online.

Writing center hours were also changed to increase usage as were the hours of availability for online appointments. In the summer session of 2008, the writing center was over budget and understaffed. In an attempt to save money while still

accommodating student needs, it was decided to close the brick-and mortar center on Mondays and Wednesdays; however, students could schedule an online appointment any weekday from 9:00 a.m. to 9:00 p.m. Closing the center on Mondays and Wednesdays enabled the center to save money while simultaneously expanding the hours during which consultations were available. The closure forced some students, who would not have done so otherwise, to try online conferencing. The result was that online usage increased substantially, with 47 online conferences hosted during the summer session.

The writing center's modified policies, coupled with a concerted effort to create a perception of online conferencing as easy and efficient, resulted in the rapid growth of synchronous online conferencing. Since many students had successfully conferenced online during the summer 2008 session, other students were willing to try the service. In essence, the growth of the synchronous consulting service followed the pattern predicted by Rogers: it grew slowly at first until a critical mass was reached after which it grew rapidly. In fall 2008, the center hosted 78 online sessions, followed by 85 online sessions in spring 2009, and 79 online sessions during the summer of 2009. A graphic of online conferencing growth appears below:

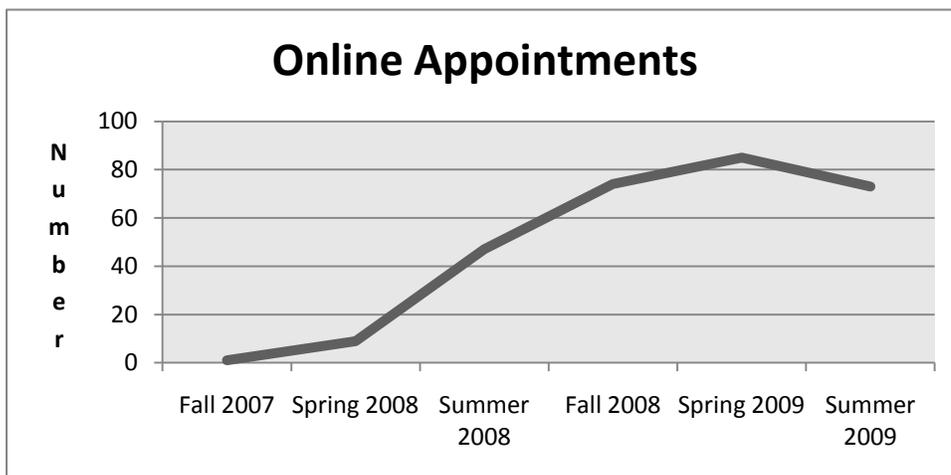


Figure 2: Growth of online appointments.

As this graph demonstrates, the number of online conferences has increased steadily since the summer of 2008. Other than the summer of 2008, there was no reduction in the writing center's hours: it resumed and has maintained its usual hours of Monday through Thursday from 4:00 -8:00 p.m. However, a change was made in relation to online appointments. In fall 2008, students who had participated in synchronous conferencing during the summer were displeased by the writing center's policy stipulating that only face-to-face appointments would be taken during hours when the brick-and-mortar writing center was open, 4:00-8:00 p.m. Monday through Thursday. Students argued that, since many of them live from thirty minutes to as much as two hours from campus and work full-time, requiring them to come to campus for a conference when they could more easily meet online was unreasonable. Since that time, the writing center has treated an appointment as an appointment, whether online or face-to-face. Online appointments are now offered during the center's normal hours of operation as well as Monday through Thursday 9:00-11:00 a.m., Saturday 9:00-11:00 a.m., and Sunday 5:00-8:00 p.m.

Synchronous Conferencing Protocol

Once Elluminate was chosen as the study's synchronous conferencing program, the writing center director and tutors completed Elluminate moderator training sessions I and II, with the director completing additional system administration training. For several weeks, tutors participated in mock tutorials alternating between playing the role of tutor and playing the role of student. An online protocol was established using guidelines for the synchronous chat protocol set forth in Beth Hewett and Christa Ehmann's *Preparing Educators for Online Writing Instruction* (2004) and Leigh Ryan's and Lisa Zimmerelli's *The Bedford Guide for Writing Tutors* (2006). As in face-to-

face sessions, tutors began by introducing themselves to the student, asking about the student's concerns, and then addressing those concerns. After having addressed the student's concern, tutors were instructed to look at and discuss higher-order concerns such as content, development, and organization, before moving to lower order-concerns such as sentence syntax, grammar, and spelling. Some sessions (those occurring in 2008) were recorded with the consent of the participants. Because of funding constraints, sessions in 2009 could not be recorded.

Writing center clients had always been asked to drop their papers off in advance of their appointment using Blackboard's digital drop box. This allowed writing center tutors to conference with more clients during the center's face-to-face hours than would have been possible had students simply brought their papers with them at the time of their appointment. Following the advice of Mark Hall and Thia Wolf (2003) as well as Beth Hewett and Christa Ehmann (2006), writing center tutors not only read the client's papers in advance, but also made notations on the papers as well, using Word's highlighting and comment functions. The problem with this pedagogical practice became apparent after just a few sessions. Marking papers digitally using highlighting and textual commentary saved tutors time, but resulted in tutor-led rather than student-led sessions and increased the power differential between tutor and student. Sessions hosted in this manner also tended to be more directive and evaluative than what is typically observed in face-to-face conferencing sessions.

Changes in conference protocol were made to keep the sessions epistemologically sound. In addition to directing tutors to refrain from marking the digital copy of the paper that would be shared with the client, application sharing protocol was also altered to give

students more control of the paper and the session. Since students drop their paper off in advance for a tutor to read, it is easy and convenient for the tutor to have the paper already on the computer screen when the student enters the synchronous conferencing session. This technique saves time since the tutor is familiar with the application sharing technology whereas the student, generally, is not; however, when application sharing, the participant who places the document online has an easier time controlling the cursor and scrolling through the document than other participants.

Leigh Ryan and Lisa Zimmerelli advise that “As a general rule, keep the writer in control of the computer and thus in control of the text” (2006, p. 66). This is pedagogically sound. Even though teaching the client how to application share can be time consuming, doing so is worthwhile when one considers that student-led conferences are less directive and more collaborative than tutor-led conferences. Furthermore, only the individual who has hosted the application sharing session can save documents modified during the session to his or her computer. When a tutor hosts an application sharing session during which the student has engaged in revision making significant modifications to the paper, the student is often frustrated and dismayed to learn that the document cannot be directly saved to his computer. Of course, the tutor can save the paper and then send it to the student, but this takes up just as much time as teaching the student to application share and does not yield the same pedagogical benefits.

The importance of patience, as well as the willingness to make modifications to procedures, cannot be underestimated when establishing a synchronous online conferencing program. The adoption of any innovative technology starts slowly and may take months, or even years to develop. In order to launch successfully the synchronous

conferencing technology described in this study, changes had to be instituted. The service had to be marketed so that students would perceive it as easy and convenient: it had to save students time. Changes in session protocol had to be made to keep the session epistemologically sound. Training students to use the service, while desirable, was not feasible; students simply would not do it. Expanding conferencing hours was necessary in order to draw more clients. Had these changes not been made, we would have had to abandon the service due to an apparent “lack of interest” as many colleges and universities have done (Neaderhiser & Wolfe, 2009). Patience and adaptability were key to the success of the service and allowed us to collect a statistically significant number of surveys that have yielded surprising results about online synchronous conferences and the students who take part in them.

QUANTITATIVE RESULTS

The results presented here were collected over two years from spring 2007 to spring 2009. During that time, all writing center clients at the host institution were sent an online questionnaire asking for input regarding their conferencing experience. The data collected through this research study was designed to test the efficacy of synchronous online conferencing and to determine whether there are significant differences between the student population choosing face-to-face conferencing and the student population choosing online conferencing. The demographic profile of study participants is presented, as well as the demographic characteristics of both student participant subsets, face-to-face clients and online clients. Online session characteristics are also presented, as are face-to-face and online client perceptions of their conferencing experience. Throughout this section, data are presented textually as well as graphically.

In this study, descriptive statistics provided by face-to-face and online writing center clients are compared to determine whether significant differences exist between face-to-face and online client demographics, pre-conference preparation, help sought, and perceptions of writing center conferences. Such comparisons are necessary, given the atypical, nontraditional student population at the host institution. The most recent administrative study of student demographics at the host institution, for example, found that 62% of students were female and 38% were male (Safferstone, 2004); thus, a perception may exist that more women than men use online conferencing, and that perception may be accurate, not because women are more likely than men to choose online conferencing, but because women significantly outnumber men at the host institution. In order to determine whether gender is a statically significant variable that

correlates with platform selection, face-to-face clients, online clients, and gender must be compared using an appropriate analysis method, in this instance a chi-square test.

Statistical measurements and tests have been chosen based on the type of data collected.

The reliability level of all statistical tests and measurements was set to 95%.

Section I describes demographic characteristics of writing center clients participating in this study. Section II compares the demographic characteristics of face-to-face and online clients (educational program, gender, age, ethnicity, travel time to campus, household status, and technology proficiency). Data are analyzed using chi-square tests to determine if there is a significance correlation between client demographic characteristics and conference platform selection. The preparedness of face-to-face and online clients is analyzed in Section III to determine whether there is a statistically significant difference in the way these student populations prepare for their writing center conference. Section IV describes the assistance sought by face-to-face and online clients and determines whether there is a correlation between platform selection and assistance sought. The perceptions of face-to-face and online writing center clients are examined in Section V to determine whether there are statistically significant differences in how face-to-face and online clients perceive their conferencing experience. Section VI assesses the likelihood of future writing center visits by face-to-face and online users. Reasons clients meet online are identified and analyzed in Section VII. Section VIII describes the frequency with which different online conferencing tools are used during online sessions, determines how frequently technical difficulties occur, and analyzes whether these technical difficulties deter clients from future online sessions.

Section I: Participant Demographics

This section describes the study participants according to degree program, age, gender, ethnicity, travel time, household status, computer ownership, and perception of technology proficiency. 279 participants took part in the study: 189 face-to-face clients and 90 online clients. The host writing center serves students enrolled in the following programs: Bachelor of Professional Studies (BPS), Master of Education (M.Ed.), Master of Business Administration (MBA), Master of Science in Management Information Systems (MSMIS), and a dual degree program in which the student receives both a Master of Business Administration and a Master in Science in Management Information Systems. While most students are enrolled in one of these degree programs, a small percentage of students are not enrolled in a degree program.

Figure 3 represents the distribution of clients by their enrollment in degree or non-degree programs: MBA, 96 students (34.4%); M.Ed. 98 students (35.1%); MSMIS 7 students (2.5%); BPS, 63 students (22.6%); Dual MBA and MSMIS, 9 students (3.2%); and non-degree, 6 students (2.2%).

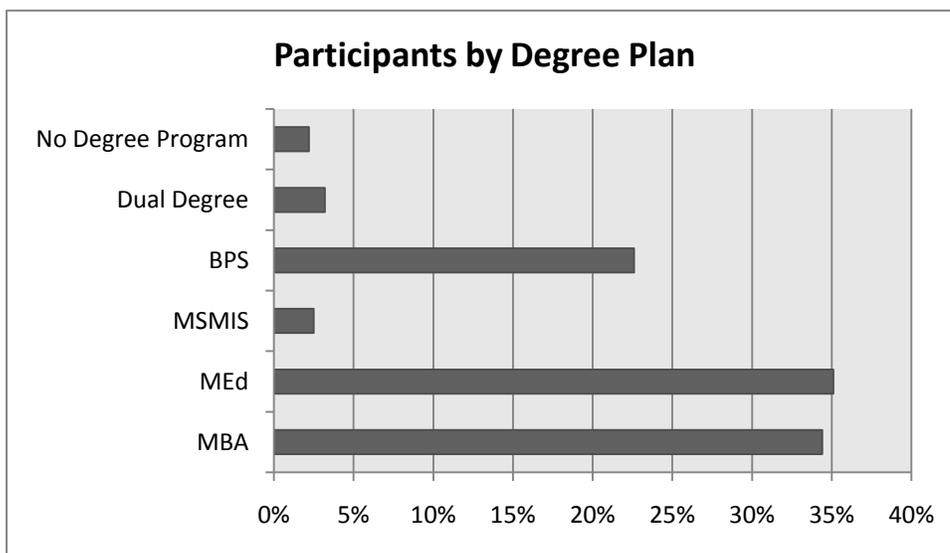


Figure 3: Distribution of survey participants by degree plan.

Age

Figure 4 displays participant distribution by age. The vast majority of survey participants fell between the ages of 25 and 54, 254 participants (90.4%). Breakdown by category is as follows: 18-24, 17 participants (6.1%); 25-34, 85 participants (30.5%); 35-44, 99 participants (35.5%); 45-54, 68 participants (24.4%); 55 and above, 10 participants (3.6%).

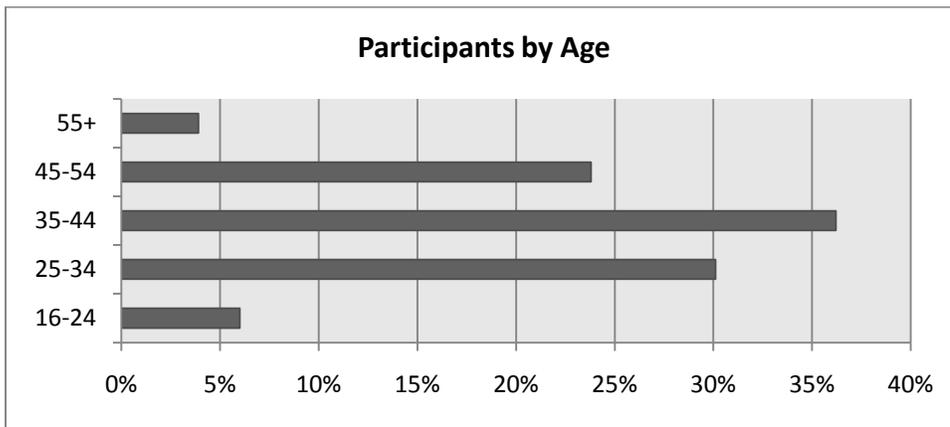


Figure 4: Distribution of survey participants by age.

Gender

Figure 5 displays distribution of participants by gender. Approximately three-fourths of survey participants were women, 211 participants (75.7%) and one-fourth of survey participants were men, 68 participants (24.3%).

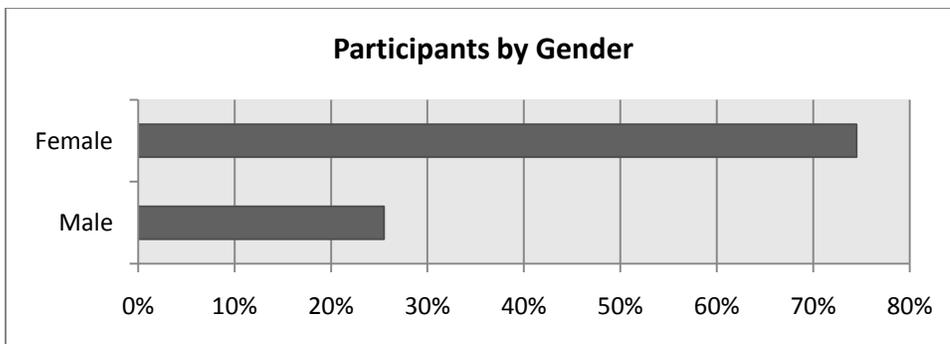


Figure 5: Distribution of survey participants by gender.

Client Culture and Ethnicity

Figure 6 depicts the distribution of survey participants by ethnicity and culture. The largest participant group was Caucasian/white, 204 participants (73.1%); the second largest group was African-American/Black, 36 participants (12.9%); the third largest group was Hispanic/Latino, 25 participants (9%). Twelve participants (4.3%) identified themselves as Asian/ Pacific Islanders, and 2 participants (.7%) did not fall into a listed category.

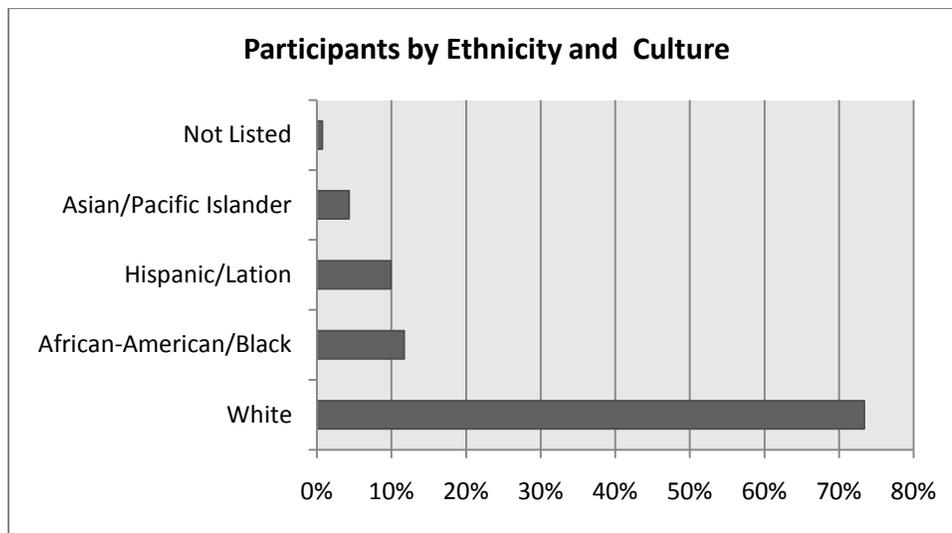


Figure 6: Distribution of survey participants by ethnicity and culture.

Employment

Figure 7 depicts the distribution of participants by employment status. The majority of participants, 184, work full time (65.9%). Almost equal numbers of participants work part-time, 44 (15.8%), or are not in the labor force, 51 (18.3%).

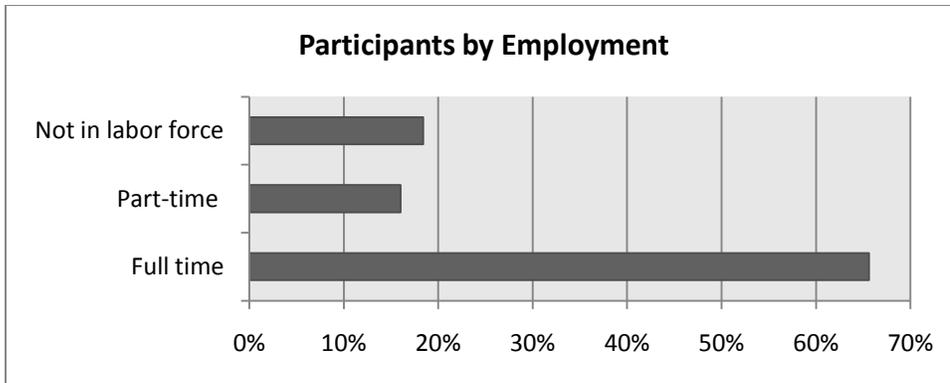


Figure 7: Distribution of survey participants by employment status.

Travel Time

Figure 8 depicts the distribution of survey participants by the time it takes them to travel to the campus. Slightly under half of survey participants, 129 participants (46.2%) travel less than 30 minutes when coming to campus; while 94 participants (33.7%) travel between 30 and 59 minutes; and 56 participants (20.1%) travel more than 60 minutes to campus.

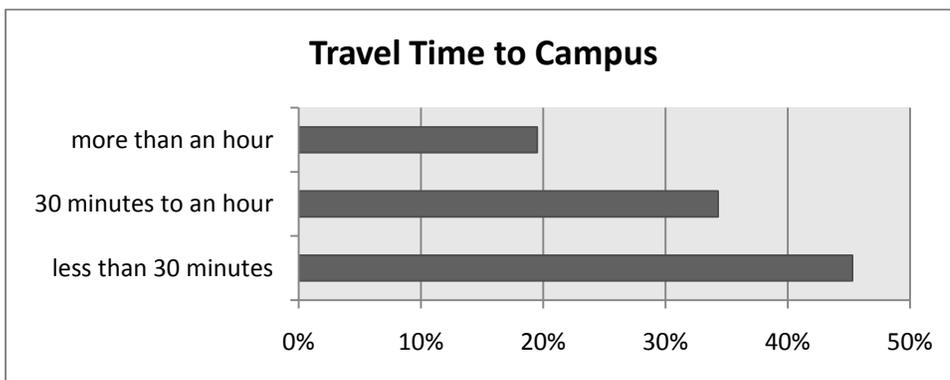


Figure 8: Distribution of survey participants by commute time.

Household Status

Figure 9 depicts the distribution of participants by household status. Over half of the participants were married without children, 147 participants (52.7%); followed by single individuals, 70 participants (25.1%); married with children, 35 participants (12.5%); single parents, 21 participants (7.5%); and not listed, 6 participants (2.2%).

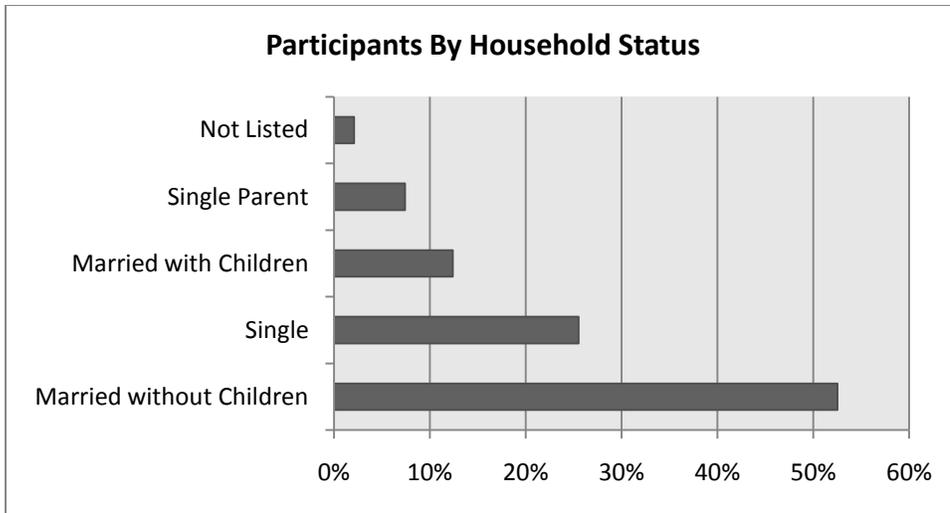


Figure 9: Distribution of survey participants by household status.

Number of Computers in Home

Figure 10 depicts distribution of survey participants by the number of computers in their homes. The largest category of survey participants reported three or more computers in their home, 116 participants (41.7%); followed by participants who have two computers in the home, 104 participants (36.3%). Fifty-seven participants (21.3%) have one computer in their home; and only two participants (.7%) of the 297 students who responded to this survey did not have a computer in the home.

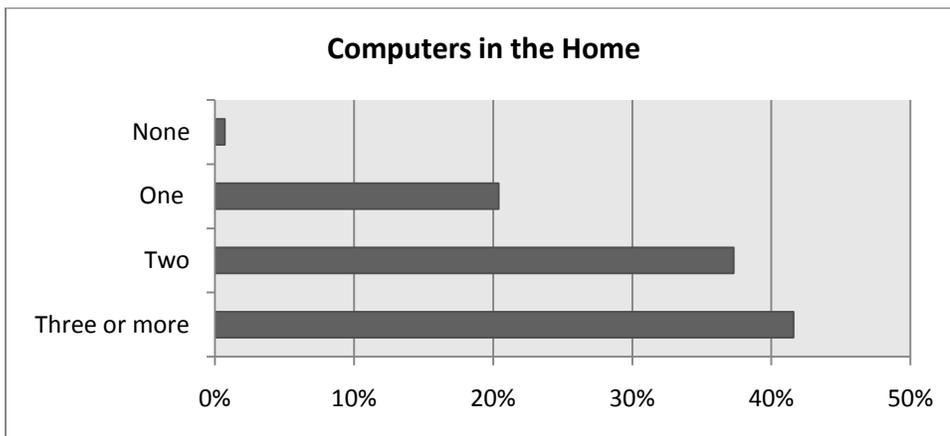


Figure 10: Distribution of survey participants by number of computers in the home.

Degree of Technical Proficiency

As part of the demographic profile, survey participants were asked to describe their degree of technical proficiency on a Likert scale of 1 to 5, with 1 representing “not proficient” and 5 representing “extremely proficient.” Figure 11 presents the distribution of survey participants in relation to technical proficiency: 2 participants (.7%) ranked their technology proficiency level as 1; 3 participants (1.1%) ranked their technology proficiency as 2; 108 participants (38.7%) ranked their technology level as 3; 110 participants (49.4%) ranked their technology level as 4; 56 participants (20.1%) ranked their technology level as 5.

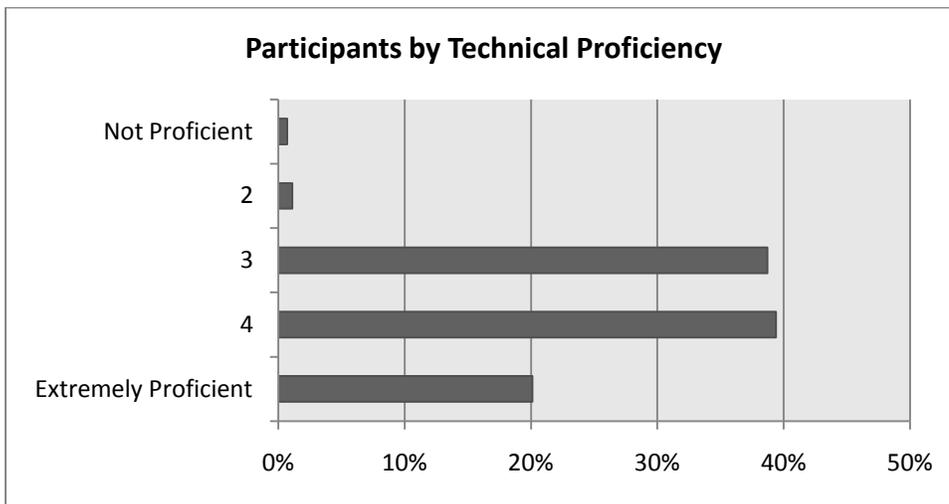


Figure 11: Distribution of survey participants by perceived technology proficiency.

Section I Summary

Section I clearly shows that the participants in this survey, while perhaps representative of the host campus population as a whole, is not representative of most university writing center users, who tend to be young residential students studying full time and working part-time, if at all. The student population at the host institution is largely nontraditional: most students are older than typical college age of 18-21; most

students work full time; most students are white females; most students would not be considered financial dependents; and all students commute to campus rather than live on campus (Carr, 2003). Thus, the participants in this study do not represent the writing center clients found on many campuses where the traditionally aged student is the norm.

Section II: Demographics of Face-to-face and Online Client Participants

The distinct characteristics of this client population make comparison between face-to-face writing center clients and online writing center clients the only meaningful way to obtain data that determines whether the demographic profile of survey participants who conference online differs significantly from the demographic profile of survey participants who conference face-to-face. Potential differences between online and face-to-face client populations are explored in this section including the following: degree program, age, gender, culture and ethnicity, employment status, travel time to campus, household status, computers in the household, and the client's perception of his or her technical skills. Again, face-to-face users are not the focus of this study but are used only to establish the norm against which online client demographic characteristics and perceptions can be measured. This section will explore the following research hypotheses:

H₀: There are no significant differences in face-to-face client demographics and online client demographics (educational program, gender, age, ethnicity, culture, distance, and household status).

H₁: There are significant difference in face-to-face client demographics and online client demographics (educational program, gender, age, ethnicity, culture, distance, and household status).

Degree Program and Conference Platform Selection

Figure 12 depicts the distribution of face-to-face clients and online clients within degree program categories: Master of Business Administration, 67 clients met face-to-face (69.8%) and 29 clients met online (30.2%); Master of Education, 67 clients (66.4%) met face-to-face and 31 clients (31.6%) met online; Master of Science in Management Information Systems (MSMIS) 2 clients (28.6%) met face-to-face and 5 clients (71.4%) met online; Bachelor of Professional Studies 44 clients met face-to-face (69.8%) and 19 clients met online (20.3%); dual degree Master of Business Administration and Master of Science in Management Information Systems, 5 clients met face-to-face (55.6%) and 4 clients met online (44.4%); clients not enrolled in a degree program, 4 clients met face-to-face (66.6%) and 2 clients met online (33.3%).

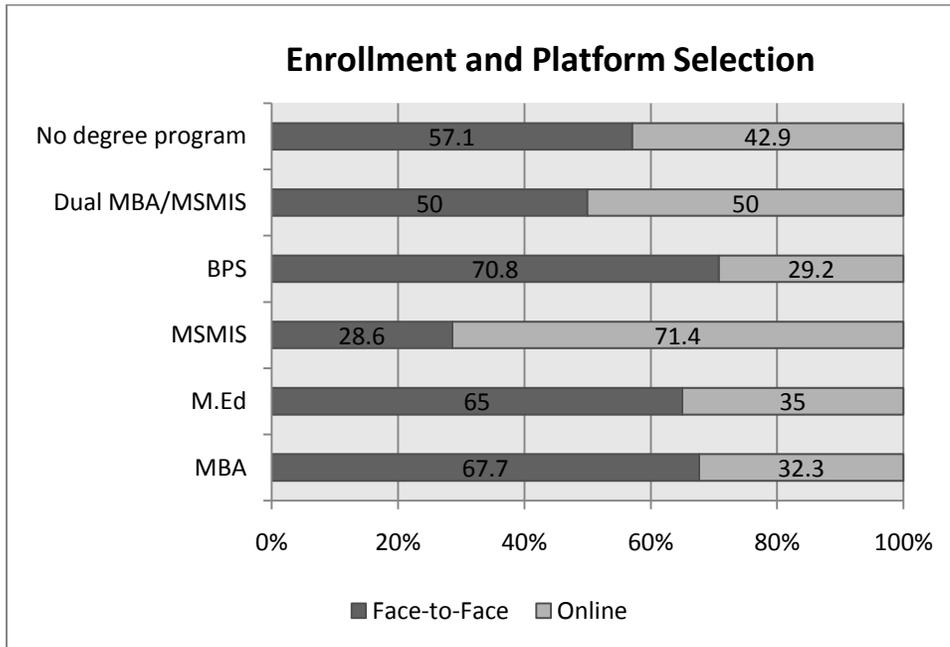


Figure 12: Distribution of face-to-face and online survey participants.

This data was analyzed using a chi-square test and has a significance value of .32, which is greater than .05; thus, the result is not significant. It is worth noting, however,

that MS MIS and the dual degree program, the two programs with the greatest percentage of online users, are technology intensive.

Client Age and Conference Platform Selection

Data was analyzed to determine whether there is a connection between a writing center client’s age and the platform selection chosen by the client. Figure 13 depicts the distribution of clients by conference platform within discrete age groups: 18-24 year-old clients, 12 face-to-face (70.6%) and 5 online (29.4%); 25-34 year-old clients 47 face-to-face (55.3%) and 38 online (44.7%); 35-44 year-old clients, 66 face-to-face (66.7%) and 33 online (33.3%); 45-54 year-old clients, 55 face-to-face (80.9%) and 13 online (19.1%); 55 and above clients, 9 face-to-face (90%) and 1 online (10%).

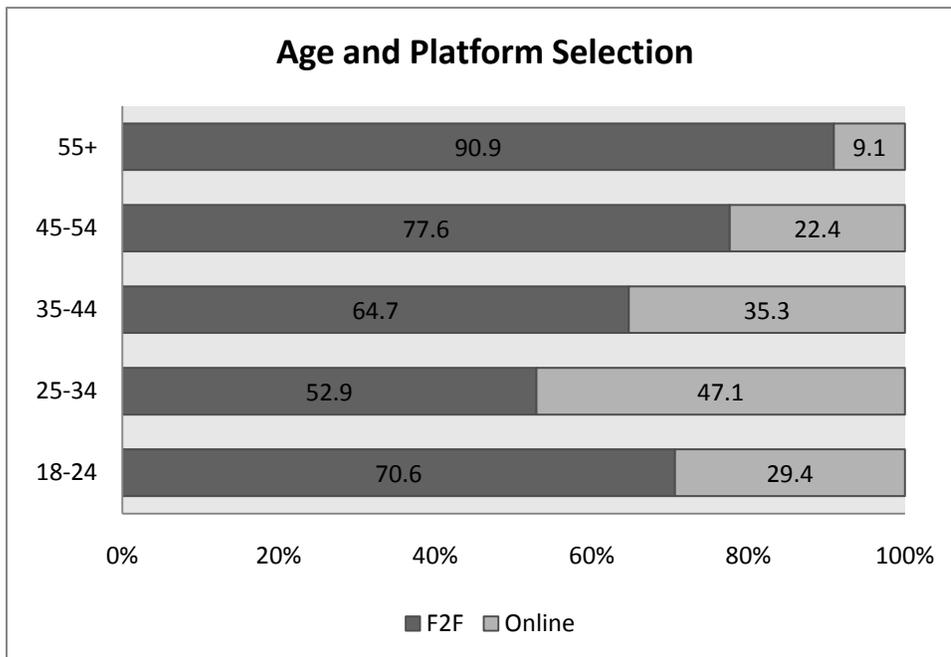


Figure 13: Distribution of survey participants by conferencing platform and age.

This data was analyzed using a chi-square test and was determined to have a significance value of .008, less than .05. Therefore, there is a significant relationship between a client’s age and the client’s likelihood of conferencing online: clients past the

age of 45 are far less likely to participate in online conferencing than those who are younger than 45.

Client Gender and Conference Platform Selection

Figure 14 shows the distribution of online and face-to-face clients within gender categories: males, 38 clients met face-to-face (55.9%), and 30 met online (44.1%); females, 151 clients met face-to-face (71.6%), and 60 met online (28.4%).

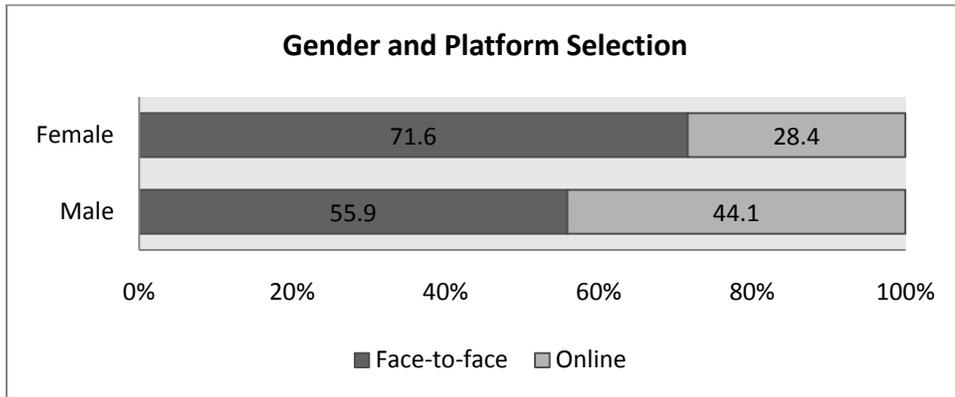


Figure 14: Distribution of face-to-face and online clients by gender.

Using a chi-square test, the data were analyzed to determine whether there is a significant relationship between gender and the selection of a conferencing platform. The associated significance value was found to be .025 making this a significant variable: there is a positive correlation between male gender and likelihood to conference online.

Client Culture, Ethnicity, and Conference Platform Selection

Figure 15 displays the distribution of face-to-face and online clients within ethnic and cultural groups: white, 132 clients face-to-face (64.7%) and 72 clients online (35.3%); African-American/black, 27 clients face-to-face (75%) and 9 clients online (25%); Hispanic/Latino, 19 clients face-to-face (76%) and 6 clients online (24%); Asian/Pacific Islander, 11 clients face-to-face (91.7%) and one client online (8.3%);

clients who identified their ethnicity as “not listed,” 0 face-to-face clients and 2 (100%) online clients.

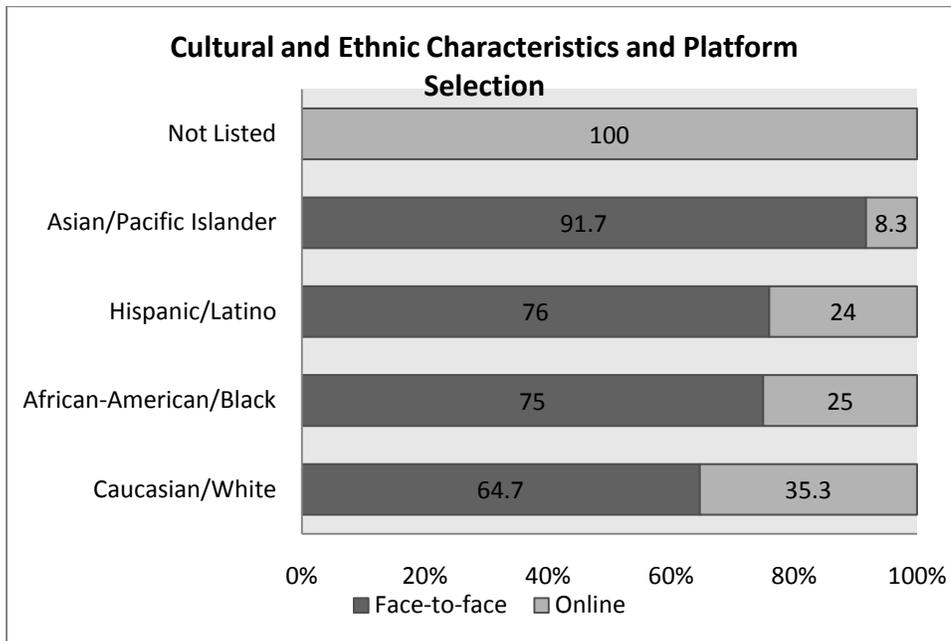


Figure 15: Distribution of face-to-face and online clients by culture and ethnicity.

Ethnic and cultural variables were analyzed using a chi-square test to determine whether a significant relationship exists between a client’s culture or ethnicity and the client’s selection of a conferencing platform. The associated significance value was found to be .043 making this a significant variable: white clients are more likely to use online conferencing than any other group.

Employment and Platform Selection

Figure 16 displays the distribution of face-to-face and online clients by employment: 128 (69.6%) clients working full time met face-to-face, and 56 (30.4%) clients working full time met online; of clients working part time 30 (68.2%) met face-to-face, and 14 (31.8%) met online; and of clients not in the labor force 31 (60.8%) met face-to-face and 20 (39.2%) met online.

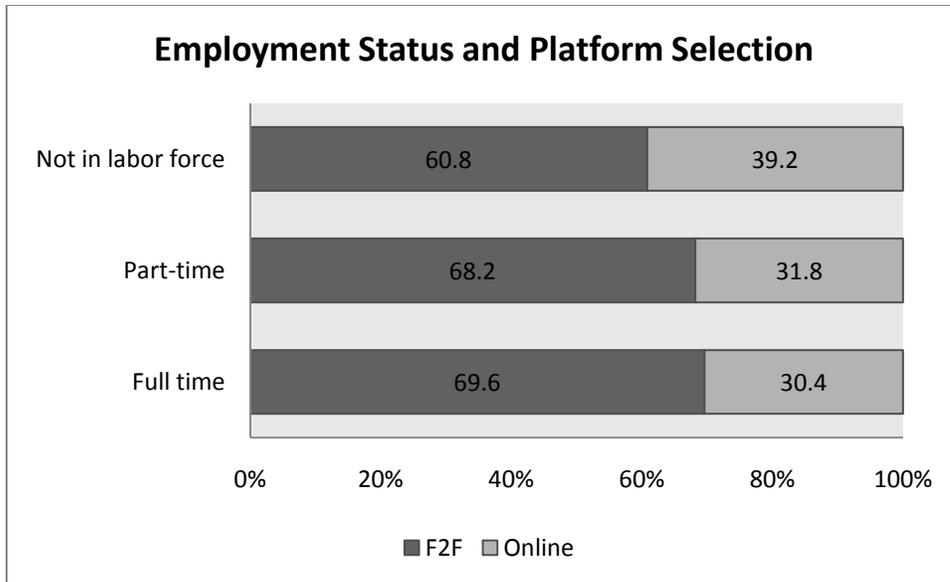


Figure 16: Distribution of face-to-face and online clients by employment status.

A chi-square test was run on this data to determine whether there is a significant relationship between the employment status of a writing center client and online conferencing. The assumed significance value was .439, greater than .05, and therefore, there is not a significant relationship between employment and online conferencing.

Client Travel Time to Campus and Conference Platform Selection

Figure 17 displays the distribution of face-to-face and online clients within travel time to campus categories: under 30 minutes, 90 face-to-face clients (68.8%) and 39 online clients (30.2%); 31-59 minutes, 66 face-to-face clients (70.2%) and 28 online clients (29.8%); 60 minutes or more, 33 face-to-face clients (58.9%) and 23 online clients (41.4%).

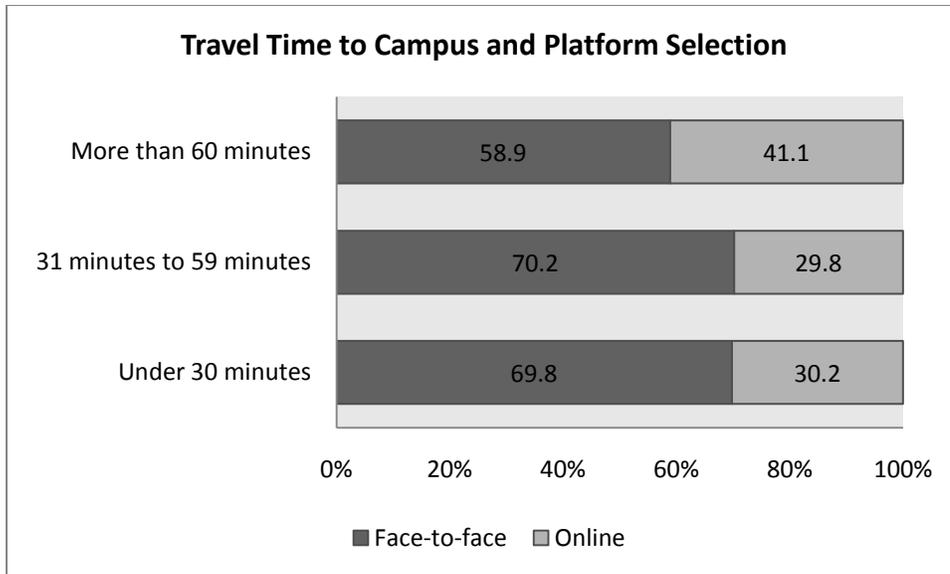


Figure 17: Distribution of face-to-face and online survey participants by time travelled to campus.

This data was analyzed to determine whether there is a significant association between travel time and choice of conferencing platform. A chi-square test determined an associated significance value of .287; therefore, distance is not a significant factor in choosing a conferencing platform.

Client Household Status and Conference Platform Selection

Figure 18 displays the distribution of face-to-face and online clients within specific household status categories: single, 42 clients (60%) met face-to-face, and 28 clients (40%) met online; single parents, 19 clients (90.5%) met face-to-face, and 2 clients (9.5%) met online; married with children, 21 clients (60%) met face-to-face clients, and 14 clients (40%) met online; married without children, 103 clients (70.1%) met face-to-face, and 44 clients (29.9%) met online; clients who identified their status as “not listed,” 4 clients (66.7%) met face-to-face and 2 clients (33.3%) met online.

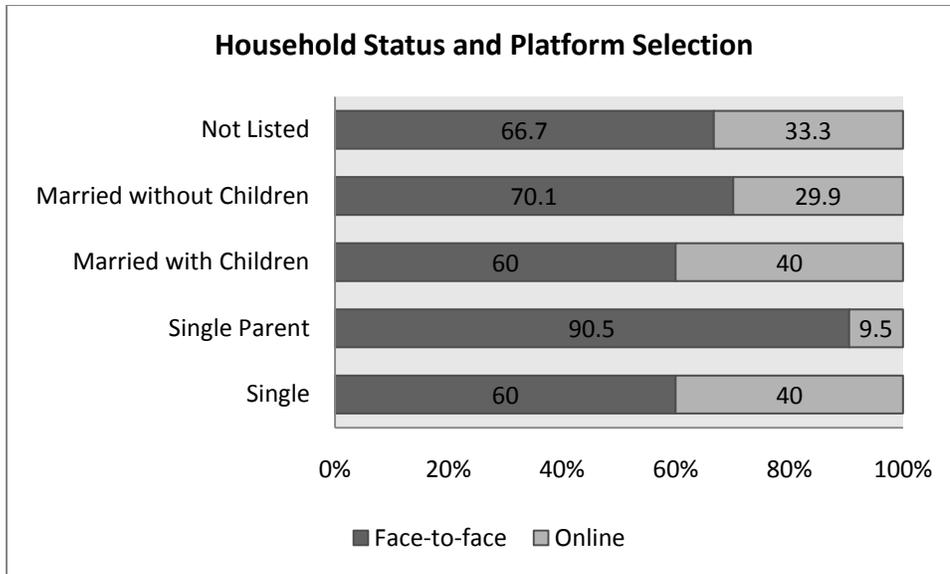


Figure 18: Distribution of face-to-face and online survey participants by platform selection.

Data was analyzed to see if there is a significant correlation between the clients' identified household status and the selection of a conference platform. A chi-square test was conducted and determined the associated significance value to be .084 and therefore, not significant.

Client Computer Ownership and Conference Platform Selection

Figure 19 displays the distribution of face-to-face clients and online clients within categories of computer ownership (number of computers in the client's household: clients without a computer in the home, 2 face-to-face clients (100%), 0 online clients; clients with one computer in the home, 40 face-to-face clients (70.2%), and 17 online clients (29.8%); clients with two computers in the home, 72 face-to-face clients (69.2%), and 32 online clients (30.8%); clients with three or more computers in the home, 75 face-to-face clients (64.6%), and 41 online clients (35.3%).

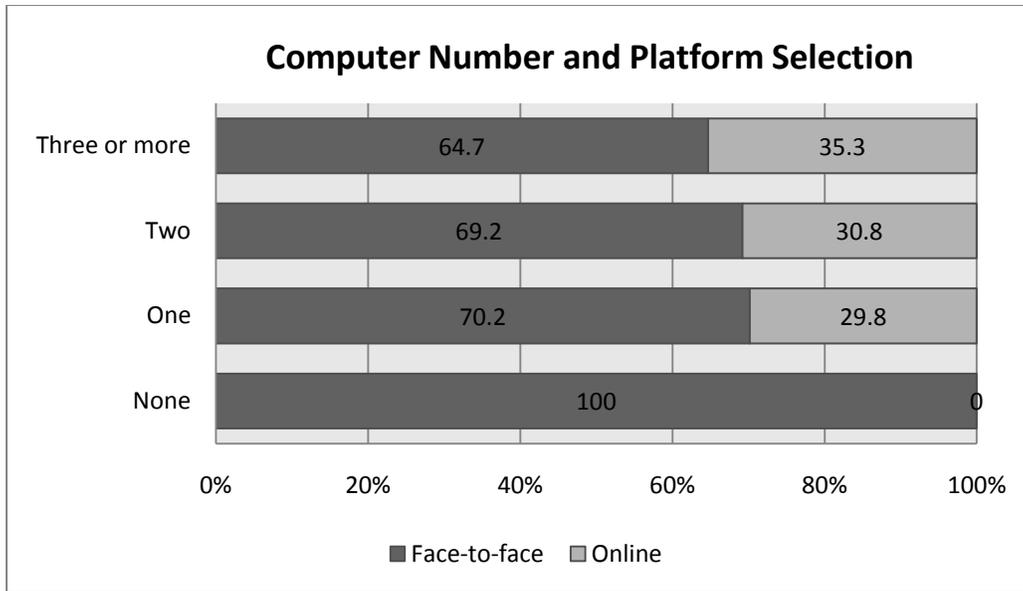


Figure 19: Distribution of face-to-face and online clients by number of computers in the home.

Data was analyzed using a chi-square test to determine if there is a relationship between the number of computers in the client’s household and the client’s choice of conference platform. The associated significance value of this data was .633; therefore, there is no correlation between the number of computers in a client’s household and his/her selection of a conference platform.

Technology Proficiency and Platform Selection

Figure 20 displays the distribution of face-to-face clients and online clients within categories of technology proficiency. The results are taken from a Likert scale that clients used to self-assess their technology proficiency. The scale started at 1 (not proficient) and ended at 5 (extremely proficient): no face-to-face and 2 online clients (100%) ranked their technology proficiency level as 1; 3 face-to-face clients (100%) and 0 online clients (0%) ranked their technology proficiency as 2; 72 face-to-face clients (66.7%) and 36 online clients (33.3%) ranked their technology proficiency as 3; 84 face-to-face clients (76.4%) and 26 online clients (23.6%) ranked their technology proficiency as 4; and 30

face-to-face clients (53.6%) and 26 online clients (46.4%) ranked their technology proficiency as 5.

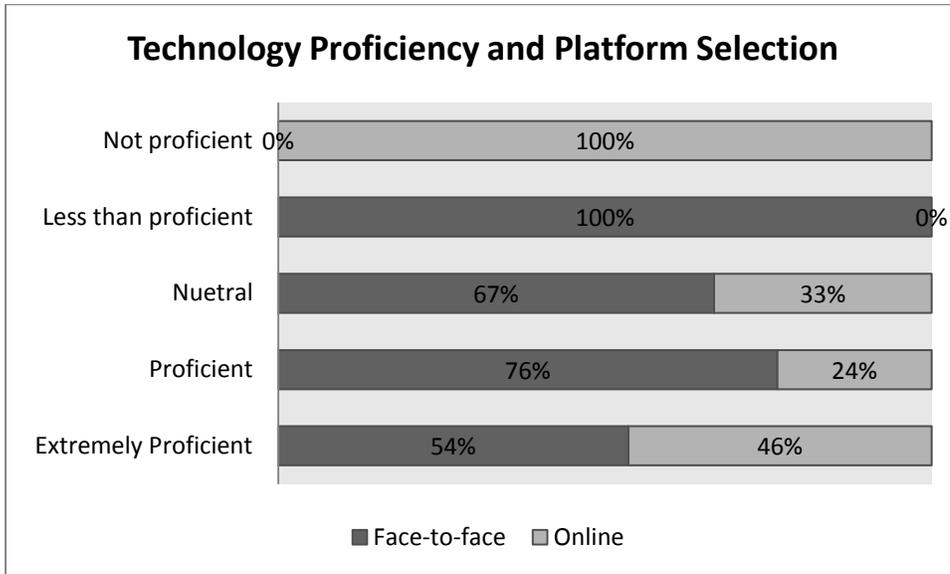


Figure 20: Distribution of online and face-to-face clients by technology proficiency.

To determine whether a correlation exists between the client’s technical proficiency and the client’s likelihood to meet online, an independent-samples t-test was performed. The statistical proficiency mean for face-to-face clients was 3.75 as opposed to a mean of 3.82 for online clients. The associated significance value was .479; therefore, there is no correlation between technology proficiency and conferencing online.

Summary of Section II

The examination of variables related to client demographics and platform selection produced the following results: there was no statistically significant correlation between client degree program, employment status, travel time to campus, household status, number of computers owned, client’s computer proficiency and choice of

conferencing platform. The following variables were determined to be statistically significant: age, gender, ethnicity, and cultural background.

Section III: Client Preparedness and Platform Selection

Section III seeks to determine whether there is a significant difference in pre-conference preparation of face-to-face writing center clients and online writing center clients. The following hypotheses are explored in this section:

- H_0 : There are no significant differences in the pre-conference preparation of face-to-face and online clients.
- H_1 : There are significant differences in the pre-conference preparation of face-to-face and online clients.

To determine client preparedness, face-to-face and online clients were asked whether they had read the assignment, had taken notes regarding their assignment, had prepared a first draft, had written multiple drafts, had brought the assignment sheet to the conference or had submitted it online, and had submitted a paper in advance of their conference. Each variable was analyzed separately; however, the results have been condensed into a single graph.

Figure 21 depicts client face-to-face and online client distribution in relation to each variable: read assignment, 125 face-to-face clients (66.1%) and 76 online clients (84.4%); took notes, 107 face-to-face clients (56.6%) and 60 online clients (66.7%); created a first draft, 135 face-to-face clients (71.4%) and 63 online clients (70%); created multiple drafts, 80 face-to-face clients (42.3%) and 50 online clients (55.6%); brought or submitted assignment sheet, 120 face-to-face clients (63.5%) and 49 online

clients (54.4%); submitted assignment to digital drop-box, 147 face-to-face clients (77.8%) and 82 online clients (91.1%).

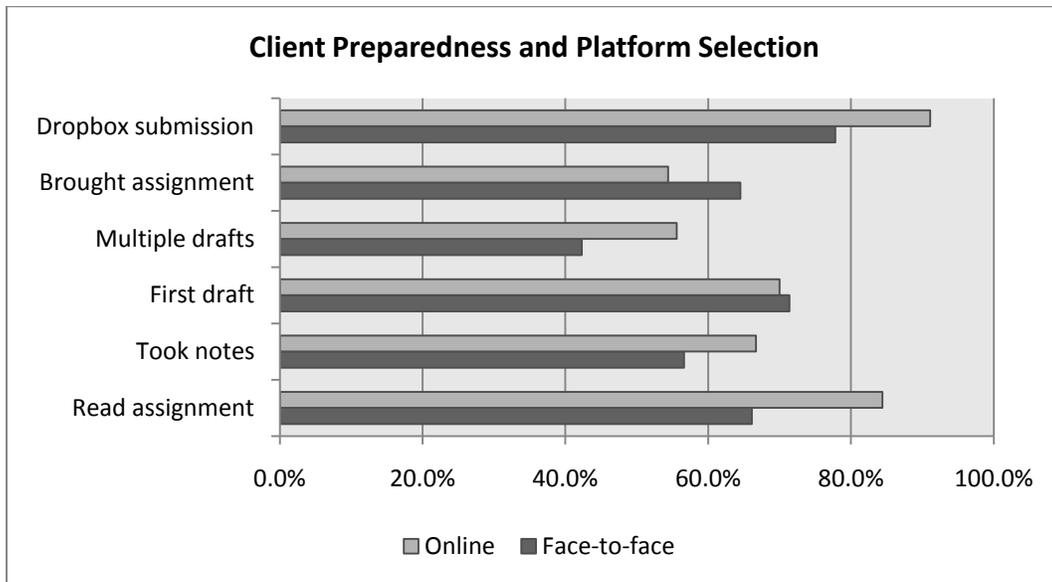


Figure 21: Distribution of face-to-face and online survey participants by conference preparedness.

All variables were analyzed using chi-square tests. The associated significance value of “read assignment” was .002 denoting that this variable is statistically significant: there is a positive correlation between reading the assignment and online conferencing. The associated significance value of “took notes” was .118, not statistically significant. The associated significance value of “first draft” was .888, not statistically significant. The associated significance value of “multiple drafts” was .041; this variable is statistically significant. Online clients were more likely to create multiple drafts than face-to-face clients. The associated significance value of “brought assignment” was .152, signifying that this variable was not statistically significant. The associated significance value of “drop-box submission” was .003, denoting a statistically significant variable: there is a positive correlation between online conferencing and paper submission through the digital drop-box.

Summary of Section III

There were no statistically significant correlations between online conferencing and the following variables: took notes, prepared a first draft, and brought or submitted an assignment sheet. The following variables displayed a positive correlation with online client conferencing: read the assignment sheet prior to the conference, prepared multiple drafts, and submitted a draft prior to the conference.

Section IV: Assistance Sought and Platform Selection

Section IV seeks to determine whether the type of assistance sought by clients in online sessions is similar to or significantly different from the type of assistance sought by face-to-face clients:

- H_0 : There is no discernable difference in the type of help that students seek when meeting face-to-face or when meeting online (higher order concerns such as brainstorming, topic development, organization, transitions; and lower order concerns such as grammar, spelling, proofreading, and documentation).
- H_1 : There is a discernable difference in the type of help that students seek when meeting face-to-face or when meeting online (higher order concerns such as brainstorming, topic development, organization, transitions; and lower order concerns such as grammar, spelling, proofreading, and documentation).

Clients were asked to select all of the items with which they were seeking assistance from the following list: topic choice, essay development, organization, transitions, grammar, spelling, proofreading, American Psychological Association (APA) documentation. Chi-square tests were conducted on all variables, but as in section III, the data has been condensed into one graphic. Figure 22 displays the following results in relation to

assistance sought by face-to-face and online clients: topic selection, face-to-face 10 clients (5.3%), online 1 client (3.5%); development , face-to-face 24 clients (12.7%), online 10 clients (11.1%); organization, face-to-face 96 clients (50.8%), online 49 clients (54.4%); transitions, face-to-face 60 clients (31.7%), online 35 (38.9%); grammar, face-to-face 121 clients (64%), online 55 clients (61.1%); spelling, face-to-face 44 (23.2%), online 32 (35.6%); proofreading, face-to-face 125 clients (66.1%), online 66 clients (73.3%); APA documentation, 157 clients (83.1%), online 72 clients (80%).

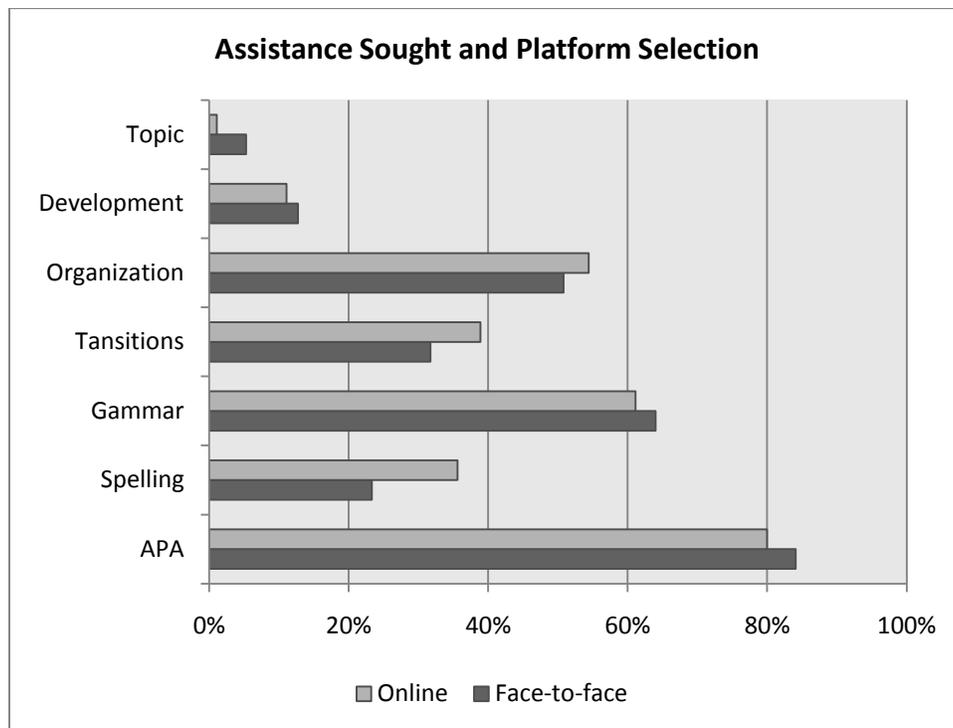


Figure 22: Distribution of face-to-face and online survey participants by assistance sought.

Data were analyzed using a chi-square test to determine whether there was a significant difference between face-to-face and online clients in relation to assistance sought. The variable “topic” was determined to have an associated significance value of .111, not statistically significant. The associated significance value of the variable “development” was .845, not statistically significant. “Organization” had an associated

significance value of .589, not statistically significant. The variable “proofreading” had an associated significance value of .271, not statistically significant. “Grammar” had an associated significance value of .691, not statistically significant. “Spelling” was statistically significant with an associated significance value of .043, showing that there is a positive correlation between spelling and online client conferencing. The associated significance value of APA documentation was .617, not statistically significant.

Summary of Section IV

Of the seven variables related to assistance sought – topic selection, essay development, organization, transitions, grammar, spelling, APA – spelling was the only variable identified as statistically significant; there is a positive correlation between spelling and online client conferencing.

Section V: Conference Perceptions of Face-to-face and Online Clients

Section V compares the perceptions of face-to-face writing center clients and online writing center clients in relation to their conference experience, specifically their tutor’s helpfulness, their tutor’s knowledge of writing, their tutor’s communication skills, and the overall quality of their conferencing experience. Face-to-face and online clients were also asked whether, and to what degree, their paper and their writing skills had improved as a result of their conference. This section addresses the following hypotheses:

- H_0 : There are no significant differences in how face-to-face clients and online clients perceive their conferences (overall successfulness of the conference including interactions and perception of the tutor’s communication skills, helpfulness, and knowledge as well as the perceived effectiveness of the

conference in relation to paper improvement, writing skills improvement, and overall successfulness of conference).

- H₁: There are significant differences in how face-to-face clients and online clients perceive their conferences (overall successfulness of conference including interactions and perception of the tutor's communication skills, helpfulness, and knowledge as well as the perceived effectiveness of the conference in relation to paper improvement, writing skills improvement, and overall successfulness of conference),

Clients were given five statements related to their conferencing experience and were asked to rate their agreement or disagreement with the statement on a scale of 1 to 5 with 1 representing "strongly disagree" and 5 representing "strongly agree."

Figure 23 displays the frequency distribution of client responses grouped by meeting type to the statement "I felt comfortable working with my tutor" : 149 face-to-face clients (78.8%) strongly agreed, 76 online clients (84.4%) strongly agreed; 33 face-to-face clients (17.5%) agreed, 12 online clients (13.3%) agree; 3 face-to-face clients (1.6%) neither agreed nor disagreed, 1 online client neither agreed not disagreed; 0 face-to-face clients (0%) disagreed, 1 online client (1.1%) disagreed; 4 face-to-face clients strongly disagreed (2.1%), 0 online clients strongly disagreed (0%).

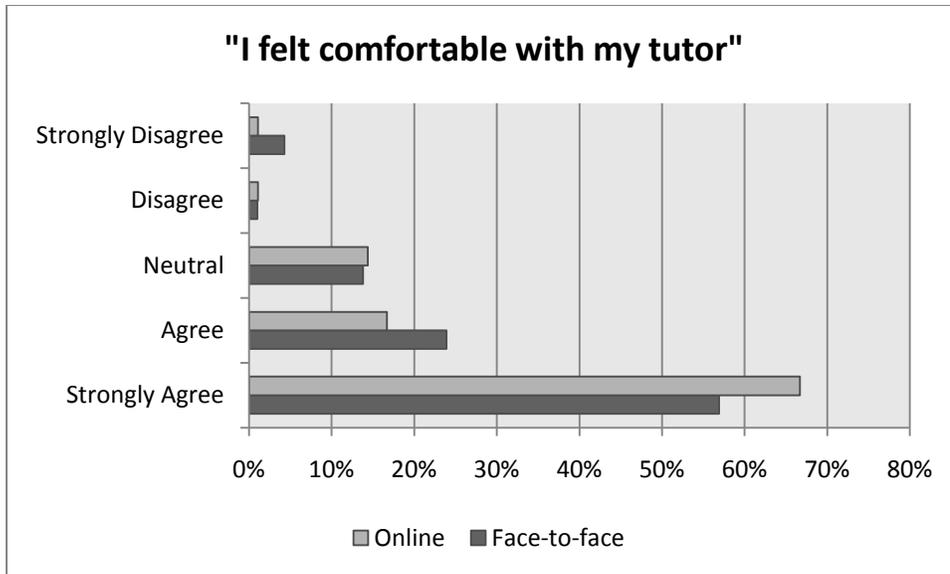


Figure 23: Distribution of face-to-face and online survey participant response to "I felt comfortable with my tutor."

The mean score for face-to-face clients was 4.71 compared to a mean score of 4.81 for online clients. To determine whether there is a significant difference in how comfortable face-to-face and online clients feel with their tutors a T-test was performed. The associated significance value was determined to be .163 which is greater than .05; therefore, there is no significant difference between these groups.

Figure 24 displays the frequency distribution of client responses grouped by meeting type to the statement "My tutor was knowledgeable about writing": 142 face-to-face clients strongly (75.5%), 76 online clients (84.4%) strongly agreed; 36 face-to-face clients (19.1%), 13 online clients (14.4%) agreed, 6 face-to-face clients (3.2%) neither agree nor disagreed, 0 online clients (0%) neither agreed nor disagreed; 0 face-to-face clients (0%) disagreed, 1 online client (1.1%) disagreed; 4 face-to-face clients strongly disagreed (2.1%), 0 online clients strongly disagreed (0%).

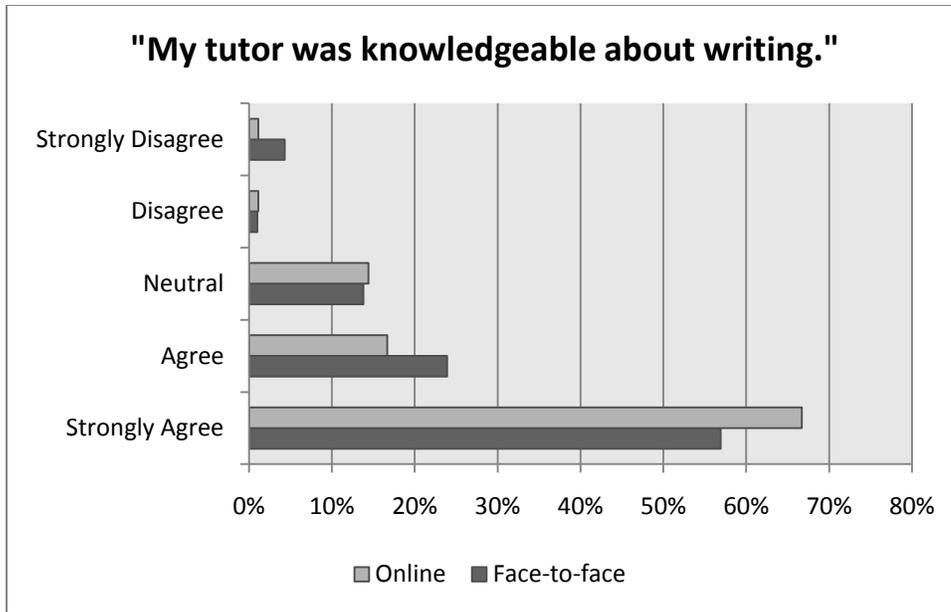


Figure 24: Distribution of face-to-face and online survey participant response to "My tutor was knowledgeable about writing."

The mean score for face-to-face clients was 4.66 compared to a mean score of 4.82 for online clients. To determine whether there is a significant difference in how knowledgeable face-to-face and online clients felt their tutors were, a T-test was performed. The associated significance value was determined to be .028 which is less than .05; therefore, there is a significant difference between these groups and a positive correlation with online conferencing.

Figure 25 displays the frequency distribution of client responses grouped by meeting type to the statement "My tutor was helpful": 144 face-to-face clients (76.2%) strongly agreed, 81 online clients (90%) strongly agreed; 34 face-to-face clients (18%) agreed, 7 online clients (7.8%) agreed; 6 face-to-face clients (3.2%) neither agreed nor disagreed, 1 online client (1.1%) neither agreed nor disagreed; 0 face-to-face clients (0%) disagreed, 0 online clients (0%) disagreed; 5 face-to-face (2.6%) clients strongly disagreed. 1 online client (1.1%) strongly disagreed.

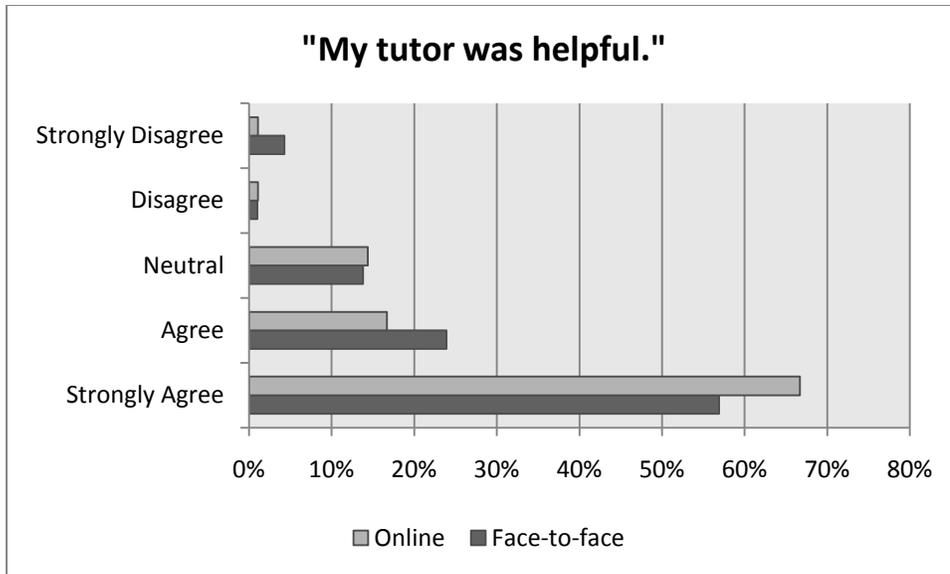


Figure 25: Distribution of face-to-face and online survey participant response to "My tutor was helpful."

The mean score for face-to-face clients was 4.65 compared to a mean score of 4.86 for online clients. To determine whether there is a significant difference in how helpful face-to-face and online clients perceived their tutors to be a T-test was performed. The associated significance value was determined to be .011 which is less than .05; therefore, there is a significant difference between these groups.

Figure 26 displays the frequency distribution of client responses grouped by meeting type to the statement "My tutor displayed strong communication skills: 149 face-to-face clients (78.7%) strongly agreed, 77 online clients (85.6%) strongly agreed; 129 face-to-face clients agreed (15.4%), 11 online clients agreed (12.2%); 7 face-to-face clients (3.7%) neither agreed nor disagreed, 1 online client (1.1%) neither agreed nor disagreed; 0 face-to-face clients (0%) disagreed, 1 online client (1.1%) disagreed; face-

to-face clients (2.1%) strongly disagreed; 0 online clients (0%) strongly disagreed.

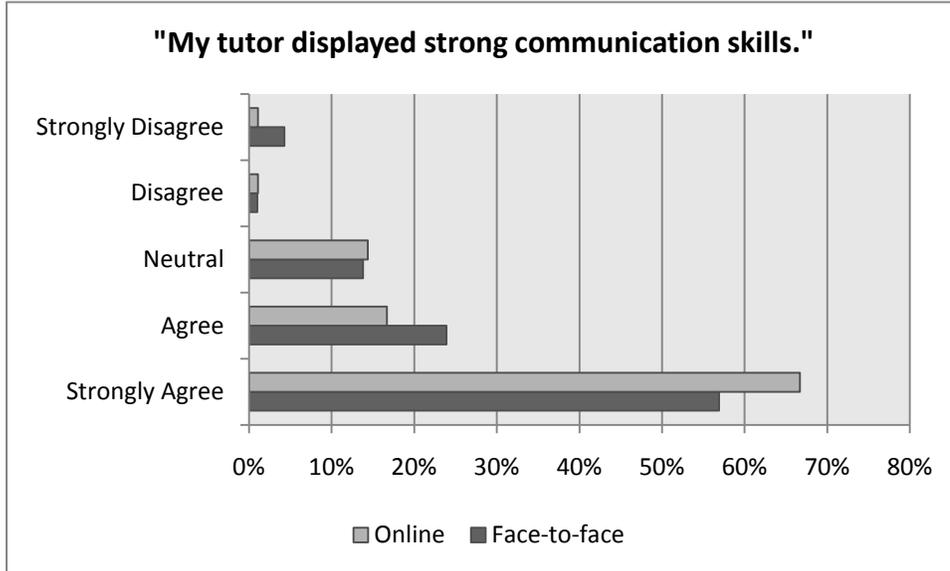


Figure 26: Distribution of face-to-face and online participant response to "My tutor displayed strong communication skills."

The mean score for face-to-face clients was 4.69 compared to a mean score of 4.82 for online clients. To determine whether there is a significant difference in how face-to-face and online clients perceived their tutor's communication skills a T-test was performed. The associated significance value was determined to be .072, not significant.

Figure 27 displays the frequency distribution of client responses grouped by meeting type to the statement "My paper improved as a result of my conference": 135 face-to-face clients (71.4%) strongly agreed, 71 online clients (78.9%) strongly agreed; 43 face-to-face clients (22.8%) agreed, 17 online clients (18.9%) agreed; 4 face-to-face clients (2.1%) neither agreed nor disagreed, 1 online client (1.1%) neither agreed nor disagreed, 1 face-to-face clients disagreed (,5%), 0 online clients (0%) disagreed; 6 face-to-face clients (3.2%) strongly disagreed, 1 online client (1.1%) strongly disagreed.

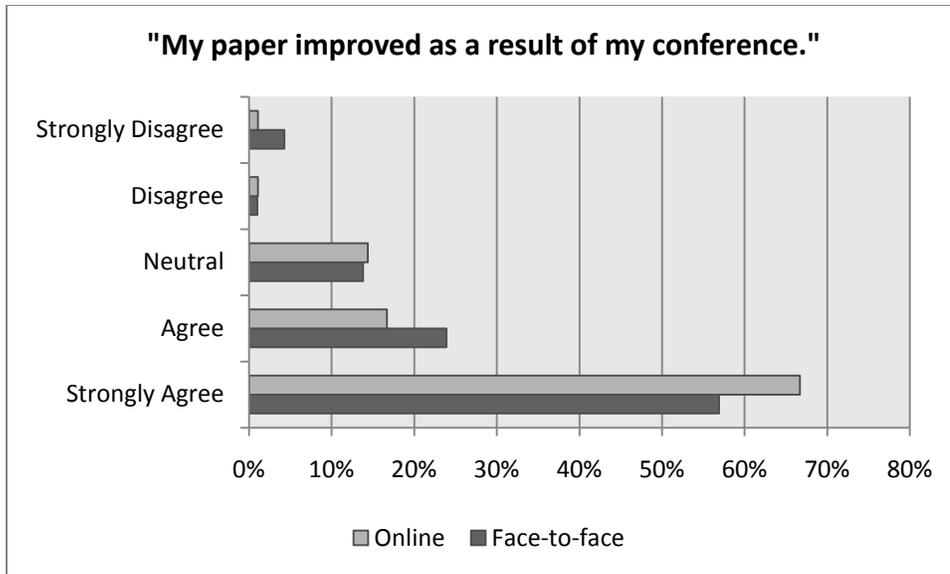


Figure 27: Distribution of face-to-face and online participant response to "My paper improved as a result of my conference."

The mean score for face-to-face clients was 4.59 compared to a mean score of 4.74 for online clients. A T-test was performed to determine whether there is a significant difference in how face-to-face and online clients perceive their paper as having improved as a result of their conference. The associated significance value was determined to be .111; therefore, there is not a significant difference.

Figure 28 displays the frequency distribution of client responses grouped by meeting type to the statement "My writing skills improved as a result of my conference": 108 face-to-face clients (57.1%) strongly agreed, 60 online clients (57.1%) strongly agreed; 45 face-to-face clients (23.8%) agreed, 15 online clients (16.7%) agreed; 26 face-to-face clients (13.8%) neither agreed nor disagreed, 13 online clients (14.4%) neither agreed nor disagreed; 2 face-to-face clients (1.1%) disagreed, 1 online client (1.1%) disagreed; 8 face-to-face clients (4.2%) strongly disagreed, 1 online client (1.1%) strongly disagreed.

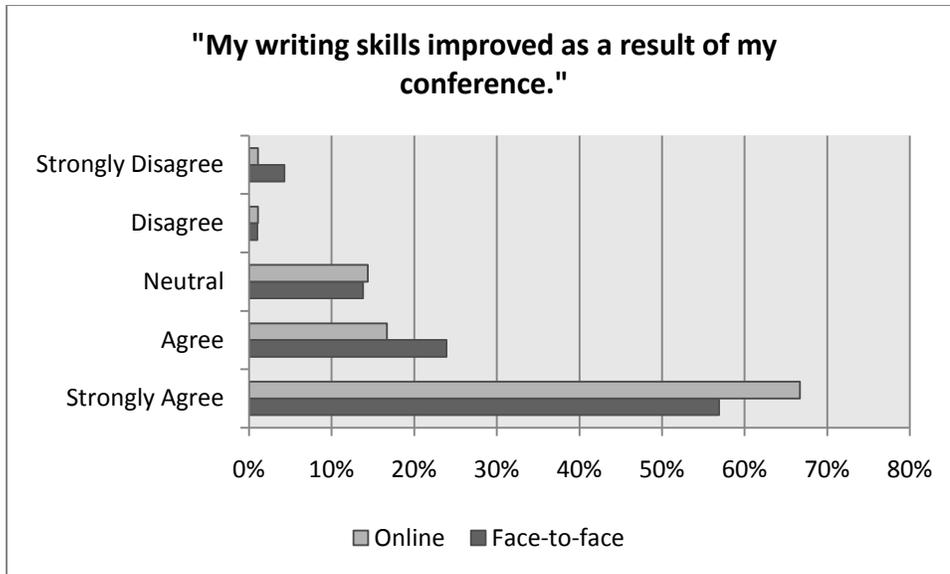


Figure 28: Distribution of face-to-face and online participant response to "My writing skills improved as a result of my conference."

The mean score for face-to-face clients was 4.28 compared to a mean score of 4.47 for online clients. A T-test determined the associated significance value to be .142, not significant.

Figure 29 displays the frequency distribution of client responses grouped by conferencing platform responding to the summary question "How successful was your conference?" Using a scale of 1 to 5 with 1 being very unsuccessful and 5 being very successful, clients were asked to rate the success of their conference. The results follow: 141 face-to-face clients (74.6%) very successful, 73 online clients (81.1%) very successful; 42 face-to-face clients (22.2%) successful, 14 online clients (15.6%) successful; 4 face-to-face clients neutral (2.1%), 2 online clients (2.2%) neutral; 2 face-to-face clients (2.2%) unsuccessful, 1 online client (1.1%) unsuccessful; 0 face-to-face clients (0%) very unsuccessful, 0 online clients (0%) very unsuccessful.

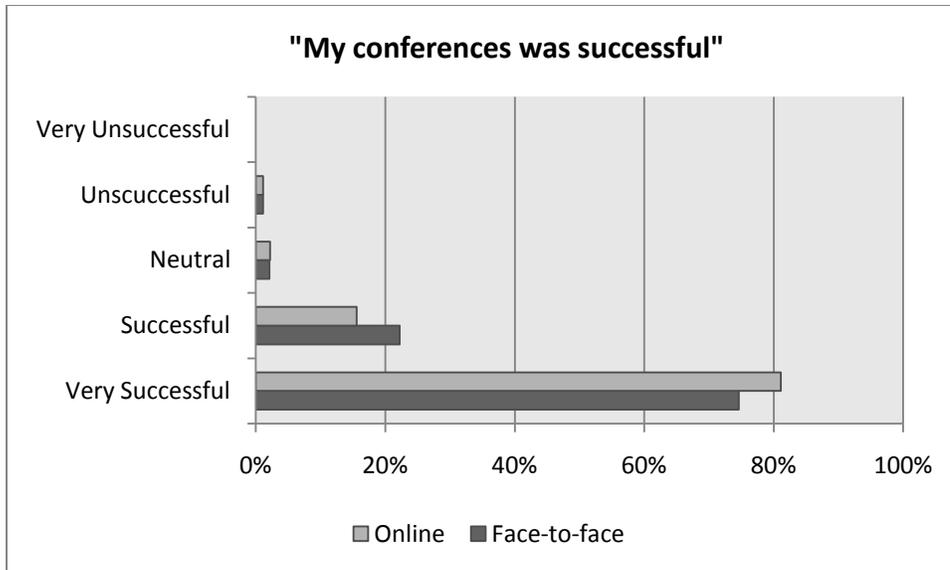


Figure 29: Distribution of face-to-face and online client response to “My conference was successful.”

The mean score for face-to-face clients was 4.69 compared to a mean score of 4.76 for online clients. A T-test determined the associated significance value to be .429 which is greater than .05; therefore, there is not a significant difference in the perception of overall conference as successful between face-to-face and online clients.

Summary of Section V

This section employed a Likert scale to determine whether there are significant statistical differences between face-to-face and online clients’ perceptions in relation to key aspects of the conferencing experience. Four variables were not statistically significant: “comfortable with my writing tutor,” “tutor had strong communication skills,” “writing skills improved,” and “conference was successful.” Two of the tested variables were significant: “tutor was knowledgeable about writing” and “tutor was helpful.” Both of these variables were positively correlated with online conferencing.

Section VI: Likelihood of Additional Writing Conferences

Section VI explores whether there is a relationship between conferencing platform, face-to-face or online, and the likelihood of a client to use the writing center in the future. This section explores the following hypotheses:

- H_0 : There is no significant difference in the likelihood that face-to-face and online clients will return to the writing center for future visits.
- H_1 : There is a significant difference in the likelihood that face-to-face and online clients will return to the writing center for future visits.

To determine whether a relationship exists between return visits and conference platform, clients were asked “How likely is it that you will visit the Writing Center again for assistance?” and were asked to rate their response on a scale of 1 to 5 with 1 being “very unlikely” and 5 being “very likely”: 10 face-to-face clients very unlikely (5.3%), 1 online client very unlikely (1.1%); 2 face-to-face clients unlikely (1.1%), 1 online client unlikely (1.1%); 6 face-to-face clients uncertain (3.2%), 9 online clients uncertain (10%); 31 face-to-face clients likely (16.4%), 7 online clients likely (7.8%); 140 face-to-face extremely likely (74.1%), 72 online clients extremely likely (80%). Figure 30 displays these results:

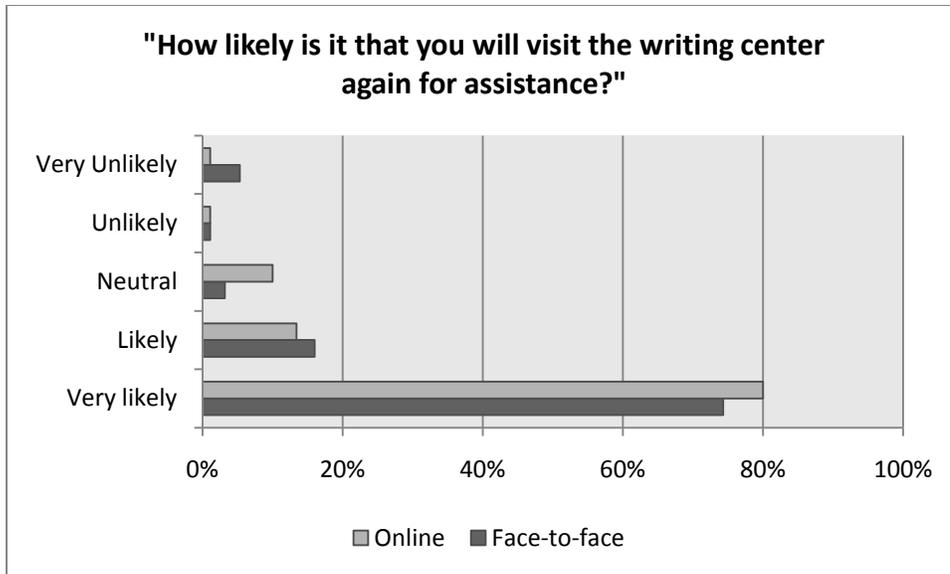


Figure 30: Distribution of face-to-face and online survey participants responses to "How likely is it that you will visit the writing center again for assistance?"

The mean value for this question was 4.53 for face-to-face clients and 4.64 for online clients. A T-test determined the associated significance value to be .345; therefore there is no significant difference between these groups in relation to their desire to use the writing center again.

Section VII: Reasons Clients Choose to Conference Online

Section seven seeks to determine what factors contribute to a client’s decision to meet online and explores the following hypotheses:

- H_0 : There are no discernable reasons that clients choose to meet online rather than face-to-face (inability to come to center, child care difficulties, travel for work, center hours, comfort level, online preference, and overall convenience).
- H_1 : There are discernable reasons that clients choose to meet online rather than face-to-face (inability to come to the center, child care difficulties, travel

for work, center hours, comfort level, online preference, and overall convenience).

Participants were given a list of factors that could contribute to their decision to meet online rather than face-to-face and were asked to check any factors that applied. This question also contained a write-in response area enabling clients to identify additional reasons.

Figure 31 displays a list of potential reasons for conferencing online and the percentage of online clients who identified each reason as a contributing factor in their decision to conference online: 38 clients identified being unable to meet face-to-face as a factor (42.2%); 7 clients identified being on travel for work as a factor (7.8%); 11 clients identified child care difficulties as a factor (12.2%); 16 clients identified their comfort level as a factor (17.8%); 21 clients identified a preference for doing things online as a factor; and 71 clients identified the overall convenience of online conferencing as being a factor (78.9%).

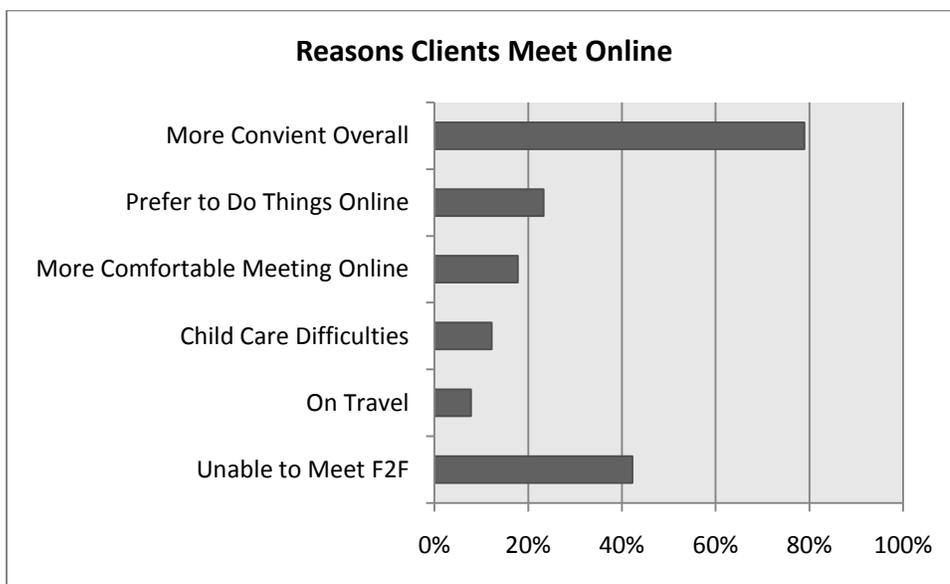


Figure 31: Reasons clients conference online.

Section VIII: Descriptive Data of Online Sessions

This section will present data that was collected exclusively in relation to online conferences. This descriptive data is meant to provide a portrait of online sessions including features used and difficulties experienced. Clients who did not experience any technical difficulties during their session will be compared to clients who did experience technical difficulties to determine whether there is a correlation between difficulties experienced and the likelihood of a client conferencing online in the future.

- H_0 : There is no significant difference in the likelihood that technical problems that occur during an online session will deter clients from meeting again with a writing center consultant online.
- H_1 : There is a significant difference in the likelihood that technical problems that occur during an online session will deter clients from meeting again with a writing center consultant online.

Before exploring these hypotheses, the frequency of features used during online conference sessions will be analyzed.

Figure 32 displays the frequency of use for the following online conferencing features: microphone, 86 clients used (95.6%) 4 clients did not use (4.4%); application sharing, 89 clients used (98.9%), 1 client did not use (1.1%); chat/text messaging, 75 clients used (83.3%), 15 clients did not use (16.7%), and web cam, 1 client used (1.1%), 89 clients did not use. Session recording is a premium feature and was only available during the 2008 academic year, during which there were 57 online sessions. During that period 21 clients did review their session (36.8%) and 36 clients did not review their session (63.2%).

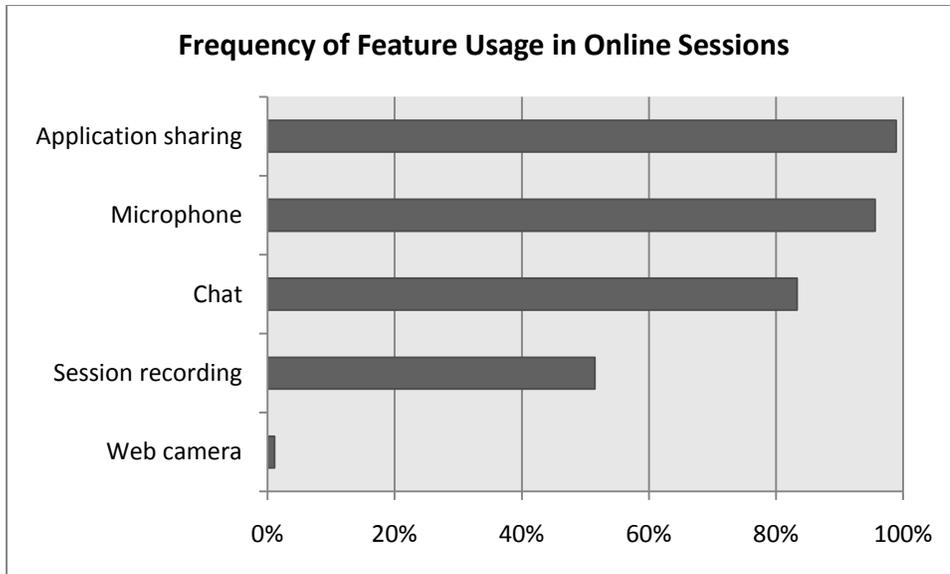


Figure 32: Frequency of feature use in online sessions.

Application sharing, VoIP (microphone), and chat are used in more than 80% of online sessions and appear to be essential features. One concern that anyone hosting an online conferencing session has is that technical difficulties with one or more of these features could occur.

When asked “Did you experience any technical problems during your session?” 36 clients (40%) stated they had experienced problems while 54 clients (60%) stated they had not experienced problems. Figure 29 displays the distribution of client response grouped by whether difficulties were experienced online and the likelihood of the consulting again online: those who experienced technical difficulties, very unlikely 0 clients (0%) unlikely 1 client (2.8%), neutral 4 clients (11.1%), likely 6 clients (16.7%), very likely 25 clients (69.4%); those who did not experience technical difficulties, very unlikely 0 clients (0%), unlikely 1 clients (1.9%), neutral 6 clients (11.1%), likely 6 clients (11.1%), very likely 41 clients (75.9%)

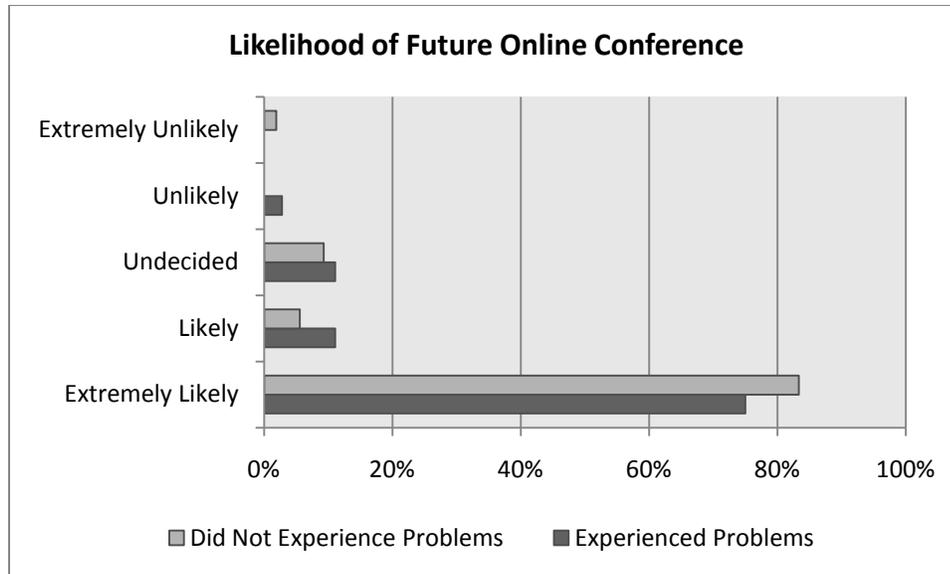


Figure 33: Distribution of online survey participant by technology problems and likelihood of conferencing online in the future.

A T-test was performed on this data to determine whether technical difficulties experienced during an online session had a significant impact on the client’s decision to conference online in the future. The mean score for those clients who had experienced technical difficulties during their online session was 4.53 and the mean score for those clients who did not experience difficulties during their session was 4.61. The associated significance value was .622; therefore, there is no correlation between whether an online client did or did not experience technical difficulties during an online session and the likelihood of conferencing online again.

Summary of Results

These results show that significant differences exist between face-to-face and online clients. Variables that were determined to be statistically significant, demonstrating a correlation with a conferencing platform, include age, gender, ethnicity, and culture. Three conference preparedness variables displayed a positive correlation to online conferencing: reading the assignment, preparing multiple drafts, and submitting a

draft. There was only one statistically significant variable in type of assistance sought: spelling was determined to have a positive correlation with online conferencing. Both face-to-face clients and online clients expressed high levels of satisfaction with their conferencing experience; however, online clients expressed greater satisfaction in relation to their tutors' writing knowledge and helpfulness. "Tutor's knowledge of writing" and "tutor's helpfulness" displayed a positive correlation with online conferencing. Even though 40% of online clients reported having technical difficulties during their conferencing session, 86% stated that they were either likely or very likely to conference online again.

In the following chapter, these results will be discussed in relation to published research studies and literature. In addition, some findings will be further explored using additional grouping techniques and statistical analysis as well as information gleaned from survey write-in responses. Client and tutor interviews, as well as online post-conference reports, will add another dimension to this research. This additional qualitative data, when combined with the quantitative analysis here, will enable us to better understand client demographics and online conferencing.

DISCUSSION

This chapter discusses the findings of the quantitative data culled from the client survey instrument. In order to interpret the data more fully and to provide triangulation of results, additional quantitative and qualitative data will be discussed. Write-in survey responses, client and tutor interviews,⁹ online tutor sessions logs,¹⁰ and session statistics pulled from post-conference report forms,¹¹ will provide more detailed information about online synchronous online conferencing.

This discussion will address the research hypotheses presented in this study and include an analysis of the demographic profile of writing center clients at the host institution, a comparison of the demographic characteristics of face-to-face and online clients focusing on statistically significant differences, and a comparison of face-to-face and online client preparedness and help sought. Responses to Likert scaled questions measuring client perceptions of the conferencing experience are also analyzed, compared, and discussed to determine the efficacy of synchronous online conferencing. Finally, the online conference itself is explored in greater detail, including reasons writing center clients elect to meet online, online conferencing protocol, and online tools typically employed during a conferencing session. The prevalence of technical problems occurring during online sessions is analyzed and discussed as well the likelihood of online clients returning for additional online conferencing sessions.

⁹ Interviews were obtained from eight online users and from four online tutors.

¹⁰ Tutors voluntarily participated in an online survey/session log in which they ranked several aspects of the conference session, including the overall successfulness of the conference.

¹¹ Post-conference report forms are filled out for all conferences regardless of platform and kept in the writing center.

The Demographic Profile of Writing Center Clients at Host Institution

Writing center clients at the host institution display many of the characteristics that have been identified as significant among nontraditional students (Allen and Seaman, 2008; Belanger and Strom, 1999; Brickell, 1995; Haynes-Burton, 2003; Hewett and Ehmann, 2004; Mohr, 1998): almost all are adult students between the ages of 25 and 52 (90.3%); most are women (75.7%); most are white (73.1%); and most work full-time (65.9%). At this institution, all students must have at least 30 college credits before entering a program, and none of the students live on campus. The majority of students travel less than an hour to campus (79.9%), though a fair percentage (20.1%) travel more than an hour to campus. There are significant anomalies, however, between nontraditional students at the host institution and nontraditional students at other colleges and universities. While the majority of students at the host institution are married (65.2%), only 12.5% of these married students have children. Another 7.5% of students are single parents, bringing the total percentage of students with children to 20%. This percentage is lower than one would expect.

Another apparent anomaly related to the nontraditional student population at the host institution is their relative affluence. Over ten years ago, students at the host institution reported a median household income of \$50, 000 (Safferstone). Although students were not explicitly asked their income in this survey, they were asked how many computers were in their home: none, one, two, three or more. The results suggest an affluent student body: 41.75% of students reported three or more computers in the home followed by 36.3% reporting two computers in the home, and 21.1% had one computer in the home. Only two students (.7%) did not have a computer in the home. As is evident

from these statistics, the students at the host institution are more than likely computer literate and at least moderately affluent. This may be due to the campus location just 45 miles from Washington D.C. in Stafford County, Virginia. In 2008, Forbes.com listed Stafford County as 11th in a list of the country's most affluent counties, with a median household income of \$85,000 (Hosh, 2007). Even though students attending the host institution are similar to most returning adult students in that they are seeking an education to further their career goals, many of the students are federal workers making a relatively good living. A final anomaly in this sample is the proportion of graduate to non-graduate students. While Brickell's (1995) research on adult post-secondary enrollments finds that there are twice as many adults in undergraduate study as graduate study, graduate students at this campus significantly outnumber undergraduate students. In this convenience sample of writing center clients, 75.2% were graduate students, and 24.8% were undergraduates.

Comparative Analysis of Face-to-Face and Online Writing Center Clients

As the literature has shown, not all writing center directors feel that there is a need to offer an online writing center component. This is particularly true of directors and administrators at traditional residential colleges and universities who continue to resist OWLs and manifest a "they can come to us" attitude (Neaderhiser & Wolfe, 2009). However, others argue that the astounding growth of online and nontraditional student enrollments must be accompanied by changes in student support services, such as writing centers. A 2009 study of post-secondary online education, conducted by the Association of Public and Land-grant Universities, states that "campuses need to be continually identifying improvements needed in the delivery of student support services" and notes

that many nontraditional students find the traditional 9-5 hours of student support services inconvenient. This is particularly troubling, given that nontraditional students are less likely to earn their bachelor's degree within five years than their traditionally aged counterparts; 31% of nontraditional students achieve this goal as opposed to 54% of traditional students (Choy, 2002). These students appear to have a greater need for such resources than traditional students. The host institution's student population is composed almost entirely of nontraditional students.

Writing center directors who employ online conferencing, such as myself, do so because they acknowledge the needs of the nontraditional student population, a population whom they see as distinctly different from that of the traditionally aged students (Crump 2000; Harris 2004; Inman, 2004; Morbacher, 2007; Ryan and Zimmerelli, 2010; Shadle, 2000). Online writing centers, according to Joyce Kinkead (1988), tap "an audience that might not ordinarily use the writing center because of time conflicts, distance problems, second language problems, or simply shyness" (p. 5). As we shall see, this study confirms some assumptions related to online conferencing and rejects others. This study confirms the hypothesis that there are differences in face-to-face client demographics and online client demographics; however, those differences are not nearly as great in number as some researchers have conjectured.

Age was determined to be a statistically significant variable in relation to clients who conference face-to-face and clients who conference online. Among the five age groups delineated in this study (18-24, 25-34, 35-44, 45-54, 55 and over), clients between 25-34 years of age ranked first in online usage with almost half (47.1%) of the individuals in this age group choosing to meet online. This was followed by individuals

between the ages of 35 and 44, meeting online 35.3% of the time. Next in online usage was the 18-24 age group, meeting online 29.4% of the time, followed by the 44-54 age group, meeting online 22.4% of the time. There is a steep drop-off after age 54 with only 9.1% of clients in that age bracket choosing to meet online. These statistics are somewhat surprising in that the age group that is most likely to conference online could be categorized as “digital immigrants.” The only group that could clearly be labeled as “digital natives,” clients between the ages of 18 and 24, ranked third in online conferencing usage. A recent study conducted by the Pew Internet American Life Project found a similar pattern in relation to age and online use: individuals between the ages of 33 and 44 were found to be more likely than individuals younger than age 33 to use the internet to obtain factual information and to conduct business transactions (Generational, 2009).

To explore further how and why age correlates with online usage, an ANOVA test was run to determine if there is a relationship between age and how clients perceived their technical skills. Clients were asked to rate their technical skills on a scale of 1 (not proficient) to 5 (very proficient). Table 3 displays the mean scores of the five client participant age groups:

Table 2: Age group and technology proficiency by mean scores.

Age Group	Count	Mean
18-24	17	4.29
25-34	85	3.84
35-44	99	3.71
45-54	68	3.69
55 and above	10	3.50
Total	279	3.77

An ANOVA analysis revealed an associated significance value of .026; therefore, there is a significant relationship between clients' ages and their perception of their computer competency. This may also contribute to the correlation between age and online conferencing in that those who perceive themselves to be proficient with technology may be more likely to conference online while those who perceive themselves as lacking strong technology skills are more likely to conference face-to-face.

Though there appear to be no published studies related to age and synchronous conferencing, a 2009 study explores whether there is a correlation between the ages of online students and the students' perceptions of online, web-based distance education courses (Dabaj, 2009). That study found that the older the students, the more likely they are to prefer face-to-face learning. Nonetheless, as the authors of the study point out, all of the study participants were online learners who had enrolled in distance education courses voluntarily. Though older students preferred face-to-face learning, they valued the convenience of online learning more. Similarly, while older writing center clients often express a preference for face-to-face conferencing, the convenience of online conferencing may trump that preference. This was clearly the case with Dave,¹² an MBA student and online client interviewed for this study. Dave began his interview by volunteering that he prefers to conference face-to-face because "you don't get to read body language over the phone." When the interviewer responded, "true," he replied, "I'm old." Dave brought up age frequently during the interview stating he was "at the upper end of those exploring a master's degree," was "over fifty years-old," and was a full-time federal worker commuting to and from Washington D.C. When asked why he

¹² Clients and tutors who were interviewed have been given fictitious names.

chose to conference online when he prefers to meet face-to-face, Dave replied, “Time, you know, it was the convenience of it, and actually, you know, since I’ve progressed through the MBA program, I’ve become more comfortable with technology.”

Dave is now “baffled” by students who do not use Skype (a free web conferencing program similar to Elluminate), which he considers essential for group work and to keep in touch with distant relatives. Dave’s case demonstrates that though students past the age of fifty may be less likely than younger students to use online conferencing, their involvement in blended and online degree programs necessitates their becoming more familiar with and more comfortable using web technologies. As these students progress through their degree programs, they may become less reticent to use synchronous conferencing.

Gender, like age, was found to be a statistically significant variable in relation to online conferencing, demonstrating a positive correlation with males. While literature concerning online writing centers frequently mentions technology, age, distance, and even ethnicity, little mention, if any, is made of gender; however, a study published in the *British Journal of Education Technology* found that males scored higher in all predictors of e-learning satisfaction than females (Lu & Chiou, 2009). Males in that study perceived e-learning platforms more favorably than females, giving higher ratings to e-learning in relation to friendliness, perceived community, and content richness than females did.

A cross-tabulation of writing center client survey participants grouped by gender and conferencing platform found gender to be a statistically significant variable (sig. = .024), demonstrating a positive correlation between males and online conferencing. To explore further the relationship between gender and online conferencing, online writing

center post-conference report forms for the years 2008 and 2009 were pulled, sorted according to gender, and cross-tabulated. (Group conference forms and forms with names that could not clearly be assigned a gender were not included in subsequent data analysis.) In 2008, 152 men (80.9%) met face-to-face and 36 men (19.1%) met online; 460 women (87.6%) met face-to-face and 65 women (12.4%) met online. A chi-square test determined the relative significance value of these data to be .031, which is below .05 demonstrating that this is a statistically significant variable. In 2009, 151 men (69.7%) met face-to-face and 66 men (30.4%) met online; 571 women (77.3%) met face-to-face and 168 women (22.7%) met online. A chi-square test determined the significance value of these data to be .026 which is statistically significant. In both years, there was a positive correlation between the male gender and the likelihood of meeting online.

Online usage increased by both genders over the course of this study. Online usage among men rose 11.3% in 2009 while online usage by women rose 10.3% in 2009. This aligns with data compiled by the Pew Internet and American Life Project, which studies internet usage across the United States. In a 2005 study comparing gender and internet use, women were shown to lag slightly behind men in their use of internet technologies: 86% of men were internet users as opposed to 80% of women. The same study also found that 68% of men were responsible for home computer maintenance as opposed to 45% of women and that 50% of men had changed their browser home pages as compared to 34% of women. This data is significant in that it demonstrates a connection between gender and technology skills.

Differences in technology skill levels may also affect a client's likelihood of conferencing online and may be divided along gender lines. Writing center client survey

participants were asked to rate their technology skill level using a Likert scale of 1 (not proficient) to 5 (very proficient). The mean for women was 3.61 as compared to 4.28 for men, a difference that was determined to be statistically significant. In addition, data relating to reasons clients chose to conference online were explored by gender using cross-tabulation. Of the possible reasons from which clients could chose, only one proved statistically significant, “prefer to do things online”: 36% of men identified this as a contributing factor in their decision to conference online rather than face-to-face as opposed to 16.7% of women who conference online (sig. = 034).

In addition to age and gender, culture and ethnicity were determined to be statistically significant (sig. = 043) in relation to online conferencing. The percentage of Caucasian/white clients meeting online was 35.3% as opposed to 25% among African-American/black clients, 24% among Hispanic/Latino clients, and 8.3% among Asian/Pacific Islander clients. These statistics suggest that a digital divide¹³ may exist between the white majority population and under-represented groups who may not own a computer or have access to the internet.

The digital divide has been a concern among educators since the term was first introduced over a decade ago, and has become increasingly relevant, given current trends in post-secondary education enrollments. The National Center for Educational Statistics (2009) recently completed a study of graduate and first-professional enrollments, finding that,

¹³ Digital divide is a term coined during the Clinton Administration to describe a gap between individuals with adequate access to computers and technology and those individuals without such access. The digital divide is often linked to issues of gender, race, income, and location.

Though whites continue to have the greatest share in enrollments, minority enrollments have increased dramatically. White enrollments in graduate programs increased at a rate of 11% as opposed to a 53% increase among minority groups, with the greatest increase occurring among the black population which boasted a 63% increase and Native Americans experiencing the slowest growth at 13% - this is still faster than growth among the white population. This pattern was true across gender, and women also enrolled across the board at a greater rate than men. (p. 111)

These demographic enrollment trends have ramifications for writing center directors, given the relationships that exist between online conferencing, gender, ethnicity, and culture. While some scholars have theorized that online access could lead to minority empowerment, giving access to all students (Inman, 2004), my data indicates that under-represented groups are less likely to use online conferencing than their white counterparts. Are issues of access to blame for the under-representation of minorities within the online conferencing client group at the host institution?

To use the host institution's synchronous conferencing service, clients must have access to a computer headset with microphone, a computer, and an internet connection. Computer headsets were given away free as a promotional item at the beginning of the study and were also made available free-of-charge through the library where students were able to check out a headset for a one-week period. Internet access is available to all writing center clients through the university's dial-up connection: one writing center tutor hosted over 60 sessions using dial-up. Nonetheless, internet connectivity may have kept some users away from online conferencing; when clients were asked in the center why

they had not tried the online service, many replied that they had dial-up and seemed skeptical when told that they could still conference online. Of the clients who used the service, the vast majority had either a cable (44.4%) or DSL (31.1%) internet connection.

Home internet access proved to be “the greatest obstacle” to online conferencing in the late 1990s (Gardner, 1998); however, internet access is far more prevalent today even among all groups. In 2008, 94% of whites had home internet access, 87% of blacks had home internet access, and 79% of Latinos had home internet access. There is a great deal of evidence, as well, that shows even students without home internet access frequently and successfully use the internet. Zayani Lavergne-Friedman, a teacher in Manhattan’s Harlem neighborhood where most students are African-American or Latino, found that many of her students “didn’t have access in their homes, but they “‘found a place’ where they could work online” (quoted in Holahan, March 2007). Elena Reyes, a community college instructor in the Rio Grande Valley, reports that her students enjoyed classes hosted using Horizon-Wimba, though only 18% of the students had access to a computer in their home (2008). Two online students with whom I worked over the course of this study were conferencing using a free internet service provided at a local fast food restaurant.

Internet access is, of course, dependent on computer access. As with internet access, computer ownership has often been linked to income and ethnicity. It was felt that questions about income on the writing center survey instrument could have a chilling effect, causing writing center clients to not complete the survey or to not participate. Rather than a question on income, survey participants were asked to provide information on the number of computers within their home. In order to determine whether computer

access was related to client ethnicity and culture, data were cross tabulated and a chi-square test was conducted. The relative significance value was determined to be .045, signaling that a statistically significant correlation does exist between computer ownership, ethnicity, and culture.

Among client survey participants, Asian/Pacific Islanders had the greatest concentration of computers within the home, with 91.6% of clients within that group reporting two or more computers; 83.3% of African American/black clients reported two or more computers in their home; 78.9% of Caucasian/white clients reported two or more computers in the home; and 72% of Hispanic/Latinos reported two or more computers in the home. If the data is analyzed solely by clients with three or more computers in the home, Asian/Pacific Islanders still lead (58.3%), followed by Caucasian/whites (45.6%), then African-American/blacks (33.3%), and last, Hispanic/Latino (16%). The distribution of survey participants in relation to computer ownership, ethnicity, and culture is depicted in figure 34.

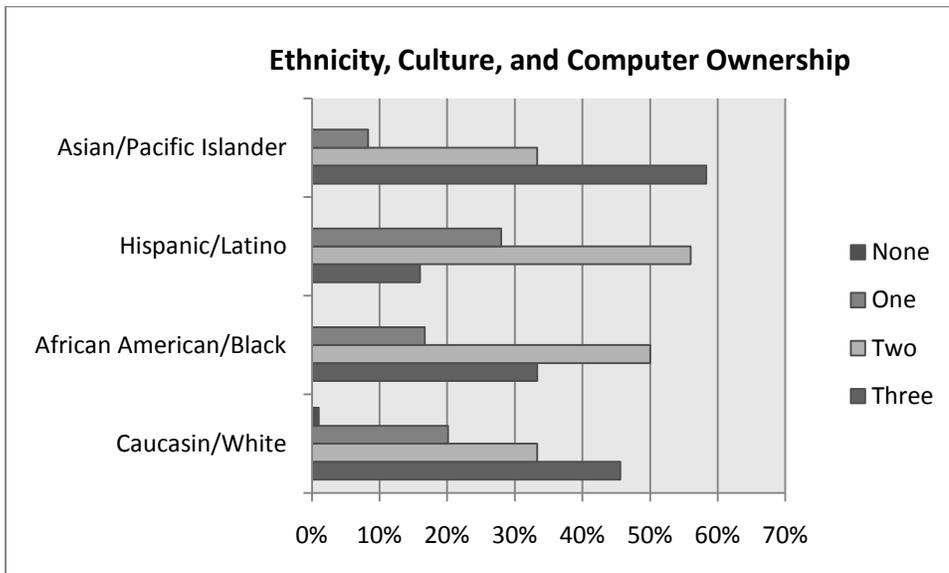


Figure 34: Distribution of computer ownership by ethnicity and culture.

This graphic demonstrates that, while there may be a correlation between ethnicity, culture, and computer ownership, the difference between groups is not great in this geographic region. Even though the Hispanic/Latino group clearly trailed other groups in computer ownership, all Hispanic or Latino survey participants reported having a computer in the home, and most participants in this group (72%) reported having two or more computers in the home. This reflects the findings of recent national internet surveys, which document a 10% increase in internet use among Latinos from 2006 to 2008, a faster rate of increase than any other ethnic or cultural group (Fox, 2009).

The percentage of black survey participants having two or more computers in their home was actually greater than the percentage of white survey participants reporting two or more computers in their home and reflects that the Capital region is “notable for having the highest proportion of African American internet users of any region in the country” (Spooner, 2003). Asians/Pacific Islanders reported more computers per household than any other racial or cultural group, with 91.6% of respondents within that group reporting two or more computers in the home, and over half of the respondents reporting three or more computers in the home. This finding substantiates studies that have found Asian Americans to be “prolific internet users,” even more likely to use the internet than white Americans (Spooner, 2001). One theory behind this is that Asians are “more likely to have a college degree and higher income than other racial or ethnic groups” (Spooner, 2001). Income and a college education have been found to be the greatest determinants of internet use, with about 90% of college-educated adults regularly using the internet (Holahan, 2007).

What do all these numbers mean in relation to online conferencing? They mean that, in all likelihood, income, computer access, and internet access cannot account for the negative correlation that exists between ethnicity and online conferencing at the host institution. Indeed, the ethnic and cultural group with the fewest online conferences, Asians/Pacific Islanders, also had the greatest number of computers in the home and, according to research studies (Spooner, 2001), outranks all other groups in internet access and use. This finding has significant ramifications for writing centers, particularly writing centers that hope to increase participation among second language learners through the implementation of an OWL. Some researchers (Brown, 2000) have hypothesized that OWL conferencing would increase ESL and ELL writing center usage. My study finds that ESL and ELL students are less likely than black Americans and white Americans to conference online.

The reticence of ESL and ELL students to conference online may be partly due not to a digital divide, but to a language barrier. ESL and ELL students often have difficulty articulating their concerns verbally. In after-session conference report logs, tutors commented that conferencing online with “non-native speakers adds an additional layer of complication,” particularly when the “student is unfamiliar and/or uncomfortable with technology.” Though sessions with ESL students tended to end with a successful outcome, the students often had difficulty logging on and negotiating the mechanics of application sharing. Their technical problems may have been exacerbated by their inability to communicate clearly with the tutor. One tutor remarked that “Students who are non-native speakers with extreme language barriers are better suited for face-to-face conferencing, because generally speaking, the tutor can read the body language of the

student or can help the student with word choice when she is unable to articulate a problem or concern.” A Latino online writing center client described her first online experience as a failure due to her difficulty to connect to Elluminate: “my new computer didn’t have all the things I needed to download programs . . . so next time, I went to my old computer and downloaded everything.” According to the client, her next online conference progressed smoothly, but “this technology was so new for me, so it was crazy.”

Another possible explanation for the relatively low participation of ESL students, particularly Latino students, may be a cultural preference for face-to-face communication (Holahan, 2007; Shadle, 2000). Writing center director Judith Powers stresses the role of communication in ESL conferencing and particularly the role of the tutor as a “cultural informant” (1993, p. 39). This role may be best carried out in a face-to-face setting where students can probe tutors about different cultural values, rhetorical conventions, and organizational strategies. Regardless of the reason, it seems clear that ESL and ELL students are less likely to meet online than students whose native language is English. This finding is similar to that of an earlier study of online client demographics by Sam Racine and Lee-Ann Kastman Breuch (2002), who noted “far fewer” ESL students than native English speakers conferencing online.

Though neither a student’s degree program nor a student’s technical proficiency demonstrated a statistically significant correlation to conferencing online, it is worth noting that the two degree programs involving computer technology expertise, the Master of Science in Management Information Systems (MSMIS) and the dual degree program in which students obtain both a Master of Business Administration and a Master of

Science in Management Information Systems had a much higher concentration of online users than other degree programs, with online conferences actually outnumbering face-to-face conferences in the MSMIS Program. Table 3 displays the percentage of students meeting face-to-face and the percentage of students meeting online within degree programs:

Table 3: Percentage of face-to-face and online participants within degree programs.

Degree Program	Face-to-face	Online
MBA	69.8%	30.2%
MEd	68.4%	31.6%
MSMIS	28.6%	71.4%
BPS	69.8%	30.2%
Dual	55.6%	44.4%

Both the MSMIS and the dual degree program have small enrollments and, consequently, they are marginally represented in this survey. There were just seven MSMIS survey participants and nine dual degree survey participants. Nonetheless, we may extrapolate from this data that writing centers serving populations with high concentrations of computer science and technology majors may find an increase in client usage among students in those degree programs.

Common sense suggests that distance from campus would be a statistically significant variable in relation to online conferencing as a number of writing center scholars have theorized (Brown, 2000; Crump, 2000; Harris & Pemberton, 2001; Mabrito, 2000; Shadle, 2000). However, this variable did not demonstrate a correlation, either positive or negative, in relation to online conferencing. Writing center clients

commuting an hour or more to campus were, however, ten percent more likely to conference online than any other group. More notable is that clients who commute less than thirty minutes to campus were just as likely, slightly more likely, to conference online as those clients who commute between thirty minutes and an hour to campus, proving that even clients living relatively close to campus may choose online conferencing.

Another surprising finding relates to client household status and the likelihood of conferencing online. Other studies have suggested that students who work full-time and students with children would be most likely to use an online service due to their hectic lives (Kinkead, 1988; Mohr, 1988); however, client survey participants who were not in the labor force were slightly more likely to meet online than clients who worked part time or full-time. Among clients not in the labor force 32.9% met online as compared to 31.8% of clients working part time, and 30.4% of clients working full-time. Similarly, no correlation was found between household status and the likelihood of meeting online. In fact, single parents who, one might surmise, would be very likely to meet online because of difficulty finding child care, were far less likely to meet online than any other group (9.5%), and single individuals were just as likely to meet online as those who are married with children. Several clients I worked with in the writing center mentioned that they had small children at home. When asked why they had not taken advantage of the online service, a common response was that visiting the center was a welcome diversion, a chance to get out of the house, and since relatives looked favorably on their educational endeavors, babysitters were relatively easy to come by. Another client remarked that if she were to conference from home, her children would end up distracting her.

Conference Preparedness

Face-to-face and online clients were asked whether they had read the assignment, had taken notes regarding the assignment, had prepared a first draft, had prepared multiple drafts, had submitted or brought the assignment sheet to the conference, and whether they had submitted a paper in advance of their conference. Online clients proved to be slightly more prepared in that there was a positive correlation between online clients and reading the assignment prior to the conference, preparing multiple drafts, and submitting the paper via the digital drop-box before the conference. This finding corresponds with information provided by clients in interviews detailing the steps they had taken to prepare for their conference.

Of the eight clients interviewed, all eight reported submitting their paper before their conference. Clients working on thesis projects frequently remarked that they needed to meet both face-to-face and online due to the length and complexity of the process; “I had to [conference] every so often because the paper was so large I wanted to bring it in so there wasn’t a huge chunk of editing at the end.” Another thesis student explained, “this project was very tedious and a lot of work, and I needed to have it revised more than once.” Graduate students interviewed for this study typically met both online and face-to-face. All online clients interviewed had written multiple drafts of their papers, and most had reviewed their paper again immediately before their online conference.

Assistance Sought

Online clients and face-to-face clients were asked to identify the type of assistance they were seeking in their conferencing session. The rank order was identical for face-to-face and online clients: 1) American Psychological Association (APA)

documentation, 2) grammar, 3) organization, 4) transitions, 5) spelling, 6) development, and 7) topic/brainstorming. The only category that was determined to be statistically significant was spelling. The inordinate concern among both face-to-face and online clients with APA documentation, spelling, and grammar is most likely due to the emphasis that faculty place on these aspects of student work. Many professors at the host institution have previously worked in the business sector where “correctness matters. A lot” (Scheer, 2005).

Unfortunately, the perception of the writing center as a “fix it” shop is persistent at the host institution and at institutions throughout the country (North, 1984 & 1994). When Greg Abrenhoerster and Jon Brammer (20002) launched an online tutorial service for the University of Wisconsin Colleges, they received numerous complaints from students who felt they were not receiving enough help correcting mechanical errors. East Connecticut State University students, in response to a survey asking them what they thought of when they heard the term “writing center,” almost uniformly pronounced that a writing center was a place that would “fix” what was wrong with their writing, a place “where people go when they’re lousy at writing and need HELP!” (Ferruci & DeRosa, 2006, p. 29). This attitude is also evident among faculty and students using high school writing centers (Childers, Jordan, & Upton, 1998; Leahy & Fox, 1989). According to one online high school writing center director, students and faculty often do not “recognize the ‘bigger’ problems with their texts” (Childers, Jordan, & Upton, 1998, p. 142).

This is also evident at the host institution where faculty frequently emphasize grammar, even when there are substantive issues within the paper. This may be because

grammar and documentation problems are easier to spot and address than problems with content, logic, or organization. A frustrated survey participant wrote:

The professor found a lot of problems with my paper. When I told him I went to the writing center, he said I should go back to them and show them his corrections. Maybe I got a better grade by going but I can't say that for sure. I was not satisfied with my grade on the paper.

This concern with product over process is prevalent among nontraditional students as is a focus on basic grammar rather than on structure or content (Cynthia Haynes-Burton, 2003). Faculty at the host institution often unwittingly enforce the student's skewed perception of grammar as well as the perception that the writing center is a "fix it" shop.

Conference reports, write-in responses, and interviews, however, show that while students schedule writing center conferences to obtain help with the mechanical aspects of their writing such as spelling or grammar, they often leave their conferencing session having addressed substantive issues as well. Face-to-face and online tutors follow the same protocol: they begin the conference by asking the client what he or she would like to address, allowing the client to set the agenda. Once the client's concern has been satisfactorily addressed, tutors help clients identify higher order concerns before turning attention to lower order concerns such as sentence syntax, grammar, and spelling.

Online participants interviewed for this study were asked how their conferences usually progressed. Their perceptions of online writing center conferences and the assistance they obtained during those conferences are closely aligned with tutor perceptions and reports which typically describe tutors as starting the conference by asking the client to set the agenda. An online client stated, the tutor "addressed my

concerns before she even addressed anything that she saw.” The same client adds, “I wanted her to look for, you know, just logic, just checking to make sure [the paper] makes sense.” After the client’s concerns have been addressed, tutors discuss higher level concerns within the paper and then move to lower level concerns. The following excerpt is one online client’s description of a “typical” session:

Usually what we start off with are major things, things that didn’t flow in the paper or things that just didn’t “fit” for one reason or another. Then we usually work with transition issues, or stuff that just didn’t sound right. If we had time, which we didn’t always, depending on the size of the paper, they would go through and help me with grammatical errors.

This conferencing protocol is identical to that of face-to-face conferencing sessions, demonstrating that online conferences can be student-directed.

An area of help, which was not listed on the survey instrument but was mentioned frequently, was identified by one respondent as learning the “language of research.” Academic writing was recognized by respondents in the study as a distinct genre. In interviews, clients expressed concern that at work they had become accustomed to writing in a style that was very different from that required in university courses. “I learned the mechanics of writing a technical paper or writing a research paper which was fairly huge to me,” one client stated in relation to his online conferencing sessions. He then added, “I graduated from high school in 1974.” Many clients expressed similar concerns and met with the writing center to obtain assistance with what they identified as an academic writing style.

Client Perceptions of the Conference Experience

Writing center scholars have almost uniformly agreed that online conferencing is not as effective as face-to-face conferencing (Baker, 1994; Childers, Jordan, & Upton, 1998; Harris & Pemberton, 2001; Jackson, 2000; Mohr, 2000; Sharon, Hara, & DeVoss, 2000; Spooner, 1994; Wallace, 1998); however, the bulk of this commentary and criticism is related to asynchronous conferencing rather than synchronous conferencing. Since synchronous VoIP technologies account for less than half of one percent of online writing center consultations (Neaderhiser & Wolfe, 2009), there have been few studies assessing their efficacy. Unlike asynchronous conferencing, synchronous VoIP conferencing maintains the dialogic structure that is crucial for collaborative learning. In order to determine the efficacy of this conferencing technology, face-to-face and online clients were asked to respond to the following statements using a Likert scale of 1 (strongly disagree) to 5 (strongly agree):

- “I felt comfortable with my tutor.”
- “My tutor was knowledgeable about writing.”
- “My tutor was helpful.”
- “My tutor displayed strong communication skills.”
- “My paper improved as a result of my conference.”
- “My writing skills improved as a result of my conference.”

Face-to-face and online clients indicated high levels of satisfaction with all aspects of their conference.

The mean response to “I felt comfortable with my tutor” was 4.71 for face-to-face conferencing and 4.81 for online conferencing, a difference that is not statistically

significant. In relation to online conferencing, this finding demonstrates that comfort and camaraderie can be achieved in a synchronous environment. The mean response to “my tutor displayed strong communication skills” was 4.69 for face-to-face conferencing and 4.82 for online conferencing, again a difference that is not statistically significant. This data demonstrates that tutors are able to effectively communicate online through VoIP and chat.

The mean response to “My tutor was knowledgeable about writing” was 4.66 for face-to-face clients and 4.82 for online clients, a difference that was statistically significant (sig. = .026), correlating positively with online conferencing. In relation to the statement, “My tutor was helpful,” the mean response for face-to-face clients was 4.65 as opposed to a mean response of 4.86 for online users, a statistically significant difference (sig. = .01), showing a positive correlation between helpfulness and online conferencing. These were the only conference perception statements that displayed a statistically significant variation between groups. In survey write-in responses, online clients frequently mentioned knowledge and helpfulness in relation to their tutors. One participant wrote that her tutor had been “very helpful, knowledgeable, and patient with my writing challenges.” Another participant stated that the online tutors she had met with were “prompt, flexible, helpful, and knowledgeable.”

Some online participant comments, however, overtly link helpfulness and knowledge to the tutor’s technical abilities. “My tutor was a great help to me,” wrote one respondent, “We experienced difficulties at the beginning starting with me e-mailing the wrong paper to her. She patiently worked with me and walked me through the process of getting my paper up and functioning so we could both see it.” Comments such as this

suggest that respondents may not be distinguishing between writing knowledge and helpfulness and computer knowledge and helpfulness. Furthermore, such comments suggest that online clients may be more likely than face-to-face clients to view their tutors as “experts.” Does tutor familiarity with conferencing technology create an inequity producing a hierarchical relationship that promotes directive rather than collaborative tutoring sessions?

Tutors participating in this study were asked “Do you feel that an online conference is as collaborative in nature as a face-to-face conference?” All tutors answered in the affirmative, and three of the four tutors interviewed stated that they felt their online sessions were more collaborative than face-to-face sessions because of the student’s ability to interact with and manipulate the document. When asked “Do you feel that online conferences are more, less, or about the same as face-to-face conferences in relation to being directive (giving specific directions to the client)?,” tutors were more divided in their response. One tutor stated, “I think that face-to-face conferences may be slightly more directive only because you have a physical copy of the paper in front of you.” Another stated that face-to-face and online conferences are “about the same” in relation to being directive. The two remaining tutors both felt that being directive “varied from student to student” and that “being more or less directive depends upon the student and not the type of conference.”

When students were asked to respond to the statement “My paper improved as a result of my conference” using a Likert scale of 1 (strongly disagree) to 5 (strongly agree), the mean score for face-to-face conferencing was 4.59 and 4.74 for online conferencing, a difference that is not statistically insignificant. This is an important

finding since it demonstrates client satisfaction with online as well as face-to-face conferences. Though every tutor knows that the goal of a writing conference is to “produce better writers, not better writing” (North, 1984, p. 69), nontraditional students are product-oriented rather than process-oriented (Brickell, 1995; Haynes-Burton, 2003). Nontraditional students often measure the success of their paper and their writing center conference by the grade they receive. When students feel that their grade improved as a result of their conference, they are more likely to return to the writing center for help with future assignments.

All eight online clients interviewed for this study responded in the affirmative when asked, “Do you feel your paper improved as a result of your conference. Write-in responses also confirmed that clients felt their paper had improved because of their visit. Though some write-in responses relate success to the grade received, “On my first paper, I was very successful and scored a 94%,” other write-in responses addressed specific aspects of the paper that had improved as a result of the conference. “My tutor was a great help to the structure, layout, content, and APA references within my research paper,” wrote one survey respondent. In client interviews, only one client overtly measured paper improvement by grade; other clients spoke about specific aspects of the paper such as sentence syntax and organization, demonstrating an awareness of the rhetorical work accomplished during the sessions.

When asked to respond to the statement “My writing skills improved as a result of my conference,” the mean for face-to-face conferencing was 4.28 as compared to a mean of 4.47 for online conferencing. The perception of online session participants was similar to that of face-to-face session participants: both groups felt that their writing skills had

improved as a result of their conferences, not just their papers. In fact, when one online client was asked whether his paper had improved as a result of his conference, he responded by saying, "I would say my writing has improved as a result of the conference." He further articulated, "I think my vocabulary has improved. I think I am more confident in my writing, which helps a lot." Organization, flow, and transitions were identified as specific areas of writing improvement by half of the clients interviewed. Grammar and lower order concerns were identified less frequently as areas of improvement. This is an important finding since some researchers have observed that online conferences lend themselves to surface corrections (Baker, 1994; Castner, 2000; Harris, 1992b), rather than global commentary.

Client survey participants were also asked to respond to the following summary questions: "How successful was your conference?" and "How likely is it that you will visit the writing center again for assistance?" In relation to success, using a Likert scale of 1 (not successful) to 5 (very successful), the mean for face-to-face conferencing was 4.69 and the mean for online conferencing was 4.76. In relation to the client's likelihood to seek assistance from the writing center in the future, using a Likert scale of 1 (very unlikely) to 5 (very likely), the mean for face-to-face conferencing was 4.53 and for online conferencing 4.76. In both instances, the difference in mean is not statistically significant, indicating that face-to-face and online clients were equally satisfied and equally likely to conference with the center again.

Most of the online clients interviewed for this study stated that they were very likely to conference with a tutor again and are frequent users of the writing center. Almost all expressed a need to have someone to look over their work. "When you write a

paper,” one online client stated, “there’s so many things that you’re just staring at it, and staring at it, and you stop seeing the mistakes or stop seeing the paper as a whole.”

Another client expressed a similar thought, “Just having a second set of eyes is important because once you write [the paper] you know what you wrote and that’s usually what you read.”

When online clients interviewed for this study were asked whether they preferred to meet online or face-to-face, the results were mixed. Three of the eight online clients interviewed expressed a preference for face-to-face conferencing, primarily because “you don’t get body language over the phone.” Three clients, however, expressed a preference for conferencing online due to convenience. One of these clients had met exclusively online, never having participated in a face-to-face conference and another had participated in just one face-to-face conference. Two clients initially stated that they felt face-to-face and online conferences were equivalent; however, both clients went on to express a slight preference for meeting online. One of these clients felt that application sharing was an additional plus in relation to online conferencing, and the other client stated he would have to give a “slight advantage” to online conferencing because he could work from home.

The Reasons Clients Meet Online

Writing centers such as that at the host institution often expand their face-to-face conferencing services to meet the needs of nontraditional students. Clinton Gardner, writing center director of Salt Lake Community College, explains:

The motives for broadening our outreach were based on several key assumptions about community college faculty and students. Both groups lead complex lives

that preclude them from full participation in a writing center. Many students, for example, hold down a full-time job, or multiple low-paying part-time jobs; attempt to take a full load of classes; often have parental obligations; and have to commute to work, day care, . . . and school. (Gardner, 1998, p. 75).

To determine whether Gardner's assumptions as well as that of other researchers are valid, survey participants who had chosen to meet online were given a list of factors commonly identified as reasons clients meet online and were asked to check all factors that applied. Clients were also permitted to write in responses. An overwhelming majority of respondents, 78.9%, identified "overall convenience" as a factor. No other factor was rated above 50%. The inability to meet face-to-face was identified by 42.2% of online client participants, comfort level by 17.8% of online client participants, childcare difficulties by 12.2% of online client participants, and travel for work was identified by 7.8% of online client participants.

Though these findings support the demographic survey data which found that single individuals were just as likely to meet online as individuals with children and that employment status and distance also did not affect the likelihood of someone choosing to conference online, client write-in responses and interviews with clients using the online service show that these factors were important for some clients. The checklist responses may not provide as clear a picture as had been hoped since some clients appear to have checked "overall convenience" though several other factors on the list may have contributed to their decision as well. "Overall convenience" appears to have become a catch-all category for clients completing the survey. To get a fuller understanding of what

motivates clients to meet online, we must turn to the write-in responses and client interviews.

Next to convenience, “time” was the word most frequently mentioned by clients as a reason for conferencing online. Online client participants wrote that the online service was “faster,” “saves time,” and is “an invaluable option for those with time constraints.” Time was often related to commutes and work. An online client who expressed a preference for face-to-face conferencing chose to conference online because he works “down in Shirlington” and could “not get back [to campus] in time to meet face-to-face.” John, an online client, chooses to meet online because of “time” and the “convenience of it.” He typically works 60 hours per week, leaves his house at 5:30 a.m. and often does not return home until 7:30 p.m. or 8:00 p.m. He prefers weekend online appointments they can be fitted in around weekend chores, such as mowing the lawn. “You have your set responsibilities for the weekend” John explains, “and rather than packing up shop and getting ready an hour early so I can be presentable, I can work up until 10 minutes before the appointment.” When asked whether he would feel the same stress to look presentable if a video camera were used during the conference, John laughed and replied, “you may see me sweat but I can always change shirts without you smelling it.”

Online clients frequently mentioned time “sitting in traffic” and avoiding “I-95 traffic” as reasons for conferencing online. Though the commute from Washington D.C. can take two hours or more, even a relatively short commute of seven miles can take forty minutes or more during rush hour because the host institution is located on a major highway. Clients who expressed concerns about commuting also frequently mentioned

saving gas as an additional reason for conferencing online. Several clients mentioned living or working in northern Virginia or Washington D.C. Though clients who commute thirty minutes or less to campus are just as likely to conference online as clients who commute between thirty minutes and an hour to campus, clients who commute more than an hour to campus were 10% more likely to use the online service than clients in other groups. “I only work a few minutes from the writing center,” said one online client, “but I live about 80 minutes away. It is much easier for me to meet on the weekends and evenings. So to be able to meet online is wonderful!”

The convenience of online hours was repeatedly mentioned in write-in responses as a reason for conferencing online. Interviewees also remarked that late evening and weekend hours were more convenient for them, confirming what many writing center directors and scholars (Brown, 2000; Gardner, 1998; Kinkead, 1998) have long believed to true: nontraditional students need conferencing opportunities extending beyond the traditional 9 to 5 hours of many campus writing centers. Two of the online clients interviewed for this study had developed a revision strategy around the online service. These clients typically conference face-to-face with a writing center tutor during the week, make revisions to their draft, and then review their revised draft during a weekend online conference, enabling them to revise their work before their next class session. This strategy makes sense given the eight-week term at the host institution.

In addition to concerns related to nontraditional students and center hours, writing center directors and scholars (Brown, 2000; Childers, Jordan, & Upton, 1998; Crump, 2000) have frequently speculated that students who are apprehensive about writing would be more likely to conference online than face-to-face. In this study, almost eighteen

percent (17.8%) of clients identified feeling more comfortable when conferencing online as a reason for choosing that option. “It has been years since I got my degree,” a client confided. “I need some extra help getting back into writing. It doesn’t bother me to look at someone face-to-face and talk about what I need to work on, but [conferencing online] was nice because I have that anonymity as well.” Michelle, an online tutor who has worked with apprehensive writers, noted that they “enjoy the ability to work with us while in the comfort of their own home.” These clients typically “feel too exposed” coming into the writing center, according to Michelle. Even though synchronous audio conferencing is not as anonymous as e-mail, it still seems to provide the apprehensive writer with a measure of comfort and even writers who did not identify themselves as apprehensive often stated they enjoyed the comfort and convenience of working from home.

Of the online clients responding to the survey, eleven listed child care difficulties as a reason for conferencing online as did two of the clients interviewed. Though child care concerns did not demonstrate a positive correlation to online conferences as some researchers have speculated (Brown, 2000; Gardner, 1998), child care is clearly a contributing factor for some clients. Over 10% of clients meeting online specifically mentioned child care in write-in responses, and while only 20% of survey participants reported having children, 40% of online client survey participants reported having children. Indeed, the genesis of this study was related to the child care issue. A client had traveled from Richmond, approximately 60 miles from the center, with two small children in tow, for a 6:00 p.m. appointment; neither child had eaten dinner. Though the client was happy with his conference and repeatedly expressed his thanks, the director

and staff thought there must be a better way to serve clients in similar circumstances. One client, a stay-at-home mom, has conferenced frequently online but has never met with a tutor face-to-face: “If I came to the center, I would probably have to bring my kids with me which leaves them to bug us whereas if we’re at home, I can say you’re going to watch TV in the basement. I’ll call you in an hour.” Comments such as this suggest that children may be a more significant demographic characteristic than the quantitative data show it to be.

A surprising survey finding was that 40% of online users are single. Most would conjecture that these single clients would be more likely to meet face-to-face than married clients or clients with children since they tend to have fewer family responsibilities and have the lowest rate of full-time employment of the groups surveyed. Single clients tend to be younger and more familiar with technology, however, and they resemble all of the online clients in this study in that they value convenience. When asked what had prompted her to use the online service, a young, single client remarked, “I had no idea that I even could use the writing center, even in undergrad, so to find that I could do it online made it so awesome. It was absolutely convenient.” “Convenience” was the word mentioned most frequently by all users of the online service and was often the first word they used when asked why they had met online. Thus, while factors such as lengthy commutes, expense, children, and comfort do contribute to an individual’s decision to conference online, convenience is the over-riding factor for all online users.

Descriptive Data of Online Sessions: Features Used

Most of the criticisms, assumptions, and assertions made in relation to online conferencing have been formulated in relation to asynchronous e-mail conferencing, a

technology that severely limits the “verbal question-answer dialectic” associated with successful, collaborative conferences (Baker, 1994, p. 6). Asynchronous conferencing, according to Joanna Castner, contradicts the “guiding principles” of writing centers in that it fails to “foster dialogue between the consultant and client” (2000, p. 120). If writing centers endorse a “view of meaning as negotiated, texts as socially constructed, and writing as knowledge creating” (Hawisher, 1992, p. 85), then a dialogic exchange enabling tutors and clients to ask questions and discover answers is critical to conference success. Synchronous VoIP conferencing, unlike asynchronous conferencing, permits tutors and clients to engage in oral, dialogic communication. These tools create a “collaborative, interactive ethos” closely resembling that of the face-to-face conference (Neaderhiser, 20009, p. 69). This section explores the technology used during synchronous conferencing sessions and examines the ways tutors and client employed specific conferencing tools.

Audio and Chat

Voice-over-internet-protocol (VoIP) is an essential tool for synchronous conferencing. It enables tutors to walk clients through set-up procedures; it allows clients to direct the course of their session; and it permits conference participants to engage in spontaneous dialogic exchanges. VoIP was used in 86 of the 90 online conferencing sessions. These sessions generally began with online set-up. “I always begin conferences,” states one tutor, “by saying hello in the chat box and explaining how to turn on the microphone. Then I help students become accustomed to the software, explain the recording process, help them upload their paper, and ask what they are most concerned with in regard to the paper.” According to online participants interviewed for

this study, after set-up is complete, tutors begin the conferencing session by asking the client to set the agenda, though some clients are clearly taken aback by this approach.

One online client wrote,

[The tutor] was saying to me, what do I want to get out of [the session]? What do you want me to look at? I thought, “I don’t know; I want you to tell me what to look at!” Yeah, that’s interesting. I want YOU to tell ME what you think is good or bad, and at that point, I just said “I want to look over everything and make sure the APA is right.”

Though the client was clearly frustrated, the tutor persisted with a practice she knew to be pedagogically sound, despite the student’s protest.

VoIP was used in 86 (95.6%) of 90 online conferences. Since most online sessions were conducted without streaming video, tutors had to be particularly attentive to aural cues. “Instead of watching the student’s body language to determine how the ‘direction’ is being taken, I must try to find cues in the student’s word choices and tone of voice during the conversation” a tutor explained. Online survey participants often expressed that they were concerned before their conference that a virtual session would be impersonal; however, they found that the use of audio coupled with application sharing personalized the experience. “I was concerned about the lack of person-to-person contact,” a client reported, “but the fact that we could look at the paper online together took care of that concern.” Another client said that, for her, the “best thing” about the online conference was “that we were talking which was great, not just typing.”

In write-in responses, clients also expressed a strong preference for VoIP rather than text chat; however, chat was also used in 83% of online conferences. Even though

VoIP conferencing has improved substantially over the past decade, audio problems still occur frequently. Twenty-two online client comments described audio problems. Clients frequently complained about poor sound quality and microphone malfunctions. Differences in computer internet access speeds created significant audio delays as well. Katrina, who frequently conferenced with clients from home on a dial-up connection, developed chat communication strategies that could be used when differences in the client's connection speed and her connection speed caused audio problems. Katrina typed comments in the chat box in addition to stating them orally. One of her clients found this strategy particularly helpful since she could copy and paste the chat notes, saving them on her computer.

Video

Though video is not essential for dialogic exchange and collaboration, many scholars feel that facial cues are essential to conferencing (Carlson & Apperson-Williams, 2000; Mohr, 2000; Thomas, Hara, & DeVoss, 2000). Facial cues allow tutors to read students and choose a “gentler” path when the eyes of a student become “misty” (Mohr, 2000). In an attempt to replicate face-to-face conferencing, tutors participating in this study were given high resolution plug-n-play cameras, and clients could check out plug-n-play cameras along with audio headsets from the library. Tutors were to greet clients via video when clients first logged into their conferencing session. Since Elluminate did not permit simultaneous video broadcast when this study was launched, tutors were instructed to stop their video broadcast after they had introduced themselves and ask the client to transmit video during the remainder of the session, allowing them to

read the client's facial expression during the conference. Problems with this arrangement became evident after just a few sessions.

While tutors were supportive of the video protocol throughout the planning stages of this study, they frequently skipped using the camera when actually conferencing with a client online. Since tutors usually are working from their home during online conferences, it was impossible to enforce the video policy. National University Writing Center Director, Shareen Grogan, shares this problem. Though her center uses ILinc, a synchronous VoIP conferencing platform with a video conferencing application, video is used infrequently because "tutors don't really want to be on camera . . . One tutor said she works online just so she can work in her pajamas!" (Grogan, 2008). Tutors at the host institution were equally reluctant to use video. A tutor remarked, "I find that one advantage to online tutoring is the comfort factor. I can come in from exercising or errands and not worry about looking unprofessional." When meeting from home, tutors simply do not want to be on camera.

While clients who had not used video during their conferencing sessions seemed to like the idea of doing so, a client who had used video during her session felt otherwise. She was "not fond of the idea" of using a video camera because she was concerned that her teenage children would use the camera inappropriately. She added, "I like the interaction, but with a camera, it isn't the same because of all the delays and waiting." Camera delays can be significant, particularly when either the client or tutor is using a dial-up connection. Tutors who did employ video during their conferences noted that it frequently interfered with application sharing. Others who had used video felt that it took

focus away from the document. “I kept watching myself and critiquing my appearance rather than the paper” one tutor remarked.

Furthermore, if one of the chief goals of online technology is the deflation of power “both geographical and psychological” (Crump, 2003), then insisting clients use web cameras while consultants do not defeats that goal. Mark Hall and Thia Wolf (2003) experienced this problem when their writing center adopted a synchronous online conferencing platform similar to Elluminate, HorizonLive. HorizonLive permitted the tutor to talk via VoIP and to transmit video; however, the client was restricted to chat communication and was unable to broadcast video. One tutor complained that “The students see and hear me, but they are faceless people in a chat room” (Hall & Wolf, 2003, p. 2). Even though the audio and video transmissions were clear with the HorizonLive platform, Hall and Wolf dropped it in favor of the all-chat WebCT, which they felt created a more democratic environment. Though clients in my study were able to use VoIP, the inequity in video broadcasting created a relationship that made consultants and clients uncomfortable, since the tutor could see the client during the session, but the client could not see the tutor. Some clients felt that the tutor had been given a window into their home while they had not been given the same privilege. This inequity created a hierarchical relationship that is antithetical to collaboration.

Attempting to mimic face-to-face conferencing in an online environment can cause frustration, according to Lee-Ann Kastman Breuch (2004). She suggests that rather than attempting to replicate all aspects of face-to-face conferencing online, writing center directors should acknowledge that conferencing online is a different experience that can be more effective in some ways. In this study, tutors and clients alike commented on the

convenience and comfort of meeting from home. Working without a video camera also creates some advantages in that “since you can’t see who you’re tutoring, you don’t bring prejudices” (Shadle, 2000, p. 6). Preconceptions and stereotyping are less likely to occur when tutor and client are unable to see one another (Ryan & Zimmerlli, 2010, p. 77.) In addition, according to one of the tutors in the study, clients who “have a bit of anxiety about coming into a writing center” take comfort in the anonymity of the online environment and feel “more relaxed and in control” when meeting from home.

In sum, video use in synchronous conferencing does not replicate face-to-face communication and can be a distraction. When conferencing online, tutors and clients primarily focus on the document and secondarily focus on the chat box. Adding a third point of visual focus can create a visual overload. Video broadcasting is also problematic for students with slow connections and can interfere with other conferencing tools. Finally, asymmetrical video broadcasting during which the tutor views the client, but the client does not view the tutor creates a power dynamic that privileges the tutor. Unless these problems can be satisfactorily addressed, video should not be employed.

Application Sharing

Application sharing, a feature that allows the tutor and client to scroll through a document and make changes to it, was the most frequently used conferencing tool, employed in all but one conferencing session. This indicates both the significance of this feature and its reliability. Since clients at the host institution are asked to drop their paper into the writing center’s digital drop-box on Blackboard¹⁴ before their conference, tutors

¹⁴ Blackboard is a course management system that is used throughout the host institution. All students on the Stafford campus are enrolled in an OWL course permitting them to drop their papers off online in advance of their conference. Students are familiar with this technology since they use it in most of their classes.

were able to read the client's paper in advance, and to have the paper on the computer screen in the application sharing mode when the client entered the conferencing session. This approach saved tutors and clients time in that the client did not have to be taught how to application share. Tutors could also mark or highlight passages and patterns of error in advance as Beth Hewett and Christa Ehmann suggest in their text, *Preparing Educators for Online Writing Instruction: Principles and Processes* (2004). Even though this approach seemed to make sense and saved time, it proved to be pedagogically unsound. Marking the paper in advance led to directive tutoring and meant that the tutor, not the client, set the session's agenda. In addition, while the synchronous conferencing platform used in this study, Elluminate, enables tutor and client to share control of a document, the individual who hosts the application sharing session has greater control of the cursor, and, therefore, greater control of the document.

In order to give clients greater control of their session, online session protocol was changed. Clients were given moderator (host) privileges at the start of their session and were walked through the application sharing process. A client describes the start of her session thus:

[The tutor] was a few minutes late, so I just waited for her to enter the room. She started typing to me, "Can you hear me?" I put my headset on . . . followed her directions, so from that point on forward, it was no problem. And then she told me this is what we are going to do, and boom, there [the paper] was and we were both looking at it at the same time.

This passage is instructive in that it shows not only that the application sharing was relatively easy for the client to accomplish, but that the client felt a sense of "place"

(Harris, 1992a). Muriel Harris, founder of Purdue OWL, has emphasized the need for “place,” defining it as a “shared space, space designed to support the relationship of the collaborators and provide means for the collaborators to interact with or manipulate the text the writer is creating” (Harris, 1998, p. 12). Online clients in this study repeatedly referred to the “space” provided by the Elluminate conferencing platform as a “room.” This syntax is significant in that it shows clients feel that they are engaged in more than a conversation when conferencing online: they are meeting with another individual for a collaborative online session in a “room” that they identify as having physical characteristics such as a white board, a microphone, and a text box.

Like Harris, Eric Miraglia and Joel Norris (2000) argue that online writing centers must find a way of creating a “virtual space in which learning dialectics can be enacted with both social and epistemological richness” (p. 85). Does the virtual room employed during synchronous conferencing provide such a space? I believe it does. Though the tutors’ “advantaged experience with the platform” may initially cause asymmetry in synchronous online conferences, according to Shareen Grogan, once clients become familiar with the platform, sessions are “highly interactive and democratic” (2008, pp. 6-7). This has been the case at the host institution. Clients in this study were given moderator privileges and taught application sharing procedures at the start of their conference. Since clients host the application sharing of their paper, they have control of their document in keeping with accepted writing center pedagogy and praxis. The more frequently clients conference online, the more democratic and collaborative their conferences become.

When tutors at the host institution were asked whether online conferences are as collaborative as face-to-face conferences, all responded that they felt online sessions were as collaborative, and often more collaborative, than face-to-face conferencing due to the application sharing feature. Online conferences are “more collaborative in nature,” stated a tutor who felt that clients conferencing online typically “provide more input” than face-to-face clients since they are working with and controlling their document. Another tutor remarked that online conferences are “more collaborative in some ways because the students are usually willing to go through the revising process right then and there, so the students and tutor can go back and forth with questions and ideas.”

Client revision appears to be more prevalent in online conferencing, signaling that synchronous application sharing is a substantive technology, a technology that affects the behaviors of tutors and clients (Blythe, 1997). In tutor and client interviews, participants frequently reported exchanging ideas and making changes to the text during the conferencing session. “The student ‘interacts’ with me,” a tutor stated, “by manipulating the document, making changes to the document, and entering comments for later review.” This interaction is often characterized by a dialogic exchange of proactive questions that leads to student revision. “The major difference” between online and face-to-face conferencing, according to one tutor, is that “the student often takes the time to fix errors and ask my opinion on revisions.” As tutor and client engage in discussion of client initiated textual changes, they simultaneously engage in metacognitive reflection and learning.

Engaging the client in the editing process during an online session promotes metacognition, according to Joel English (1998). Jamie Thurber, director of the writing

center at the University of Alaska, Fairbanks, concurs. Thurber sees students who conference online as being more willing to take notes and revise their texts than students meeting in face-to-face conferencing sessions. Online conferencing, according to Thurber, has led to an “increase in students finding and correcting their own errors” (2000, p. 156). This tendency was also observed at the host institution. In an online session log, a tutor describes working with a student who manifested a pattern of error in relation to pronoun/antecedent agreement. During the session, the student “found and corrected the errors in the paper.” The tutor commented, “I doubt [the student] will have the problem in the future. She expressed surprise at how often she committed the error.”

Revision of student texts during application sharing was not limited to grammar or sentence structure. Tutors observed that “concerns with organization and flow” were often addressed during online sessions. Working with a digital text online allows the student to cut and paste large amounts of text and to experiment with alternative organizational strategies. This process was chronicled in an online after-session report:

This was an interesting conference because the student had a lot of difficulty with organization and coherence in her paper. She actually rewrote the introduction online and then rewrote the beginning of most paragraphs to improve coherence.

There was a significant amount of revision – more so than in a face-to-face conference.

Groups that met online were also more likely to revise their work during the conferencing session than groups that met face-to-face at the writing center. A client who participated in an online group session remarked, “The thing about Elluminate is that we could all see

the document so if one person would type in a change or make a change, we could immediately respond, yes, no.”

In 1997, Stuart Blythe predicted that the computer could “bring changes both in how tutors and students interact and in their sense of the task at hand” (p. 100).

Synchronous VoIP conferencing coupled with application sharing creates a collaborative online environment that promotes revision, making conferencing sessions more interactive. Clients in online sessions feel that they are “getting work done,” and are therefore, more willing to revise than clients in face-to-face sessions who are working with a paper copy of their text. Students hosting the application sharing session are able to save the modified document to their computer. Nontraditional students, in particular, see application sharing as a significant time-saving feature and one of the advantages to conferencing online.

Session Recording

The initial funding for the study allowed the writing center to subscribe to a premium version of Elluminate that provided session participants with a video recording of their conferencing session. Immediately after a session ended, tutors and clients were sent an automated e-mail that included a link to their session’s recording. This feature allowed clients to revisit their session after it had terminated, promoting metacognition through what Schön has termed “reflection-on- action” (1998). Unfortunately, funding for the premium service ran out in spring 2009, forcing the center to switch to a less expensive version of Elluminate that did not include session recording capabilities.

Reliable usage data can only be obtained for the 2008 academic year. During that year, 34%

of online users reviewed the video recording of their session via the link they received in their post-session e-mail.

A session recording allows tutors and clients “a second glance” at their session and is particularly beneficial for those clients who take poor notes. There were no write-in responses related to this feature, and none of the clients who were interviewed had used it. A tutor reported that she found the session recordings helpful. She would revisit the sessions via the recording if she felt she may have omitted an important point during the conference, or if she was concerned that advice she had given on a technical point, such as APA citation, had been in error. In instances such as these, she reviewed the session and contacted the student with additional information if she deemed it necessary. She noted, as well, that viewing the recorded sessions increased her awareness of strengths and weaknesses in relation to her conferencing technique. Recorded sessions can, as they did for this tutor, increase reflective thought and metacognition. Recorded sessions can also provide writing center directors with a valuable training resource. Though some researchers have expressed concern that session recording could encourage clients to co-opt the exact phrasing of consultants (Crump, 2000; Shewmake & Lambert, 2000), the benefits of session recording outweigh the risks.

Technical Difficulties and Online Conferencing

Technical problems occurred in 40% of the online conferencing sessions chronicled in this study. Often those problems were minor, but some problems were so severe that they resulted in the termination of the session. Clients who experienced technical difficulties during their online sessions were asked to describe the nature of those difficulties. Consultants also detailed the nature of technical difficulties in their

online post-conference session logs. Figure 31 displays the distribution of technology problems based on coded data from clients and tutors.

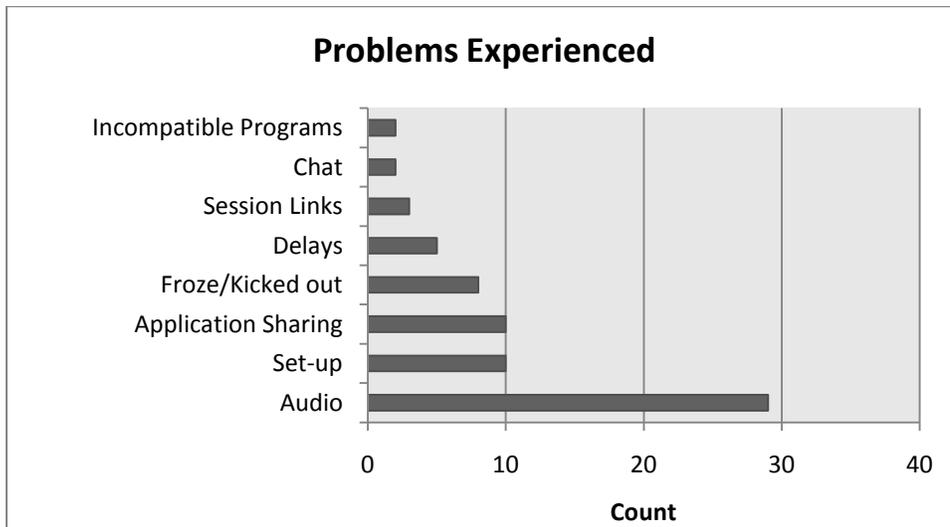


Figure 35: Reported frequency of technology problems in online conferencing sessions.

Audio problems occurred most frequently with participants reporting microphone failure, inability to talk simultaneously, failing audio connections, and extreme echoes. Though some problems were caused by the client’s inability to connect audio equipment correctly, more frequently problems were the result of program failures or widely divergent internet access speeds between tutor and client. Group sessions with three or more participants exacerbated audio difficulties.

Set-up problems also occurred frequently. Initially, clients were instructed to view a ten-minute tutorial and take part in a free one-hour participant training session hosted by Elluminate prior to their online conference; however, this requirement deterred clients from using the service. Clients felt that any time saved by using the online service was mitigated by the training requirement, so they opted for meeting face-to-face. Dropping this requirement may be responsible for some set-up problems; however, one client who had taken the time to watch the training video was still unable to connect her computer

successfully during her first online session, and canceled the session after 45 minutes of unsuccessful attempts. This same client, however, eventually became a frequent user of the online service.

Some clients reported problems receiving their e-mail conference invitations and session link. Since these e-mails are automated and were sent through the Elluminate server rather than through the university server, some e-mail systems flagged the invitations as “junk mail.” To combat this problem, when clients made their appointments, they were asked to provide the phone number at which they could be reached during the conferencing session. If a client was more than ten minutes late entering the conferencing session, the tutor called the client to make sure that he or she had received the e-mail link. Tutors also called clients who appeared to be in the session but were unable to set-up their audio. Possibly due to language barriers, set-up problems occurred more frequently with ESL and ELL clients than with clients who are native speakers, and after-session logs show that tutors often contacted ESL and ELL clients by phone to offer assistance during their first session. Subsequent sessions tended to run smoothly.

Apart from audio and set-up problems, the most common problems reported were “frozen” computer screens and lost connections. Both problems can only be remedied by exiting and then re-entering the session. While at least one tutor attributed problems to area thunderstorms, internet providers were often the source of connectivity problems. Some cable internet users, for example, found that their computer internet connection and home VoIP phone connection were on the same frequency, causing the internet to disconnect whenever there was an incoming call. Firewalls often caused connection

problems, as well. In fact, in one post-session log, a tutor writes, “This session went well. I had tried to meet with the student previously online and was not able to do so because I was trying to connect using a campus computer.” At the start of this study, tutors were unable to conference directly from the writing center. While tutors on campus could log into the session and briefly enter the virtual room, they were dropped almost immediately from the session. It took several weeks to convince IT that this was a firewall issue rather than an issue with Elluminate. Given that across the country writing center directors are frequently the builders and designers of OWLs (Sadle 2000; Neaderhiser & Wolfe, 2009), similar problems can be anticipated to occur at other institutions as well.

Incompatible connection speeds and programs were also responsible for some session problems. Session participants should set their connection speed in conjunction with the slowest computer connection speed being used in the session. For example, if a cable user meets with an individual using dial-up, the connection speed for both participants should be set to dial-up. One tutor, who could only get a dial-up connection from her home, successfully conducted over 60 online sessions; however, clients who had set their connection speed to DSL or cable experienced significant audio delays. A similar problem is the use of incompatible programs and computers. While Elluminate allows MAC and PC users to meet and view the document online, the document can only be modified by the individual hosting the application sharing session. A related problem is the incompatibility of different word processing programs. While almost all the clients in this study used Word to create their documents, a few clients used a different word processing application. Again, while the document could be viewed by both tutor and

client, it could only be scrolled through and changed by the client. This is an inherent problem in synchronous conferencing platforms.

This brief description of technology problems illustrates that such problems occur frequently during synchronous conferencing sessions. However, clients who experienced problems during conferencing sessions still reported that they were very satisfied with their conferencing experience. All study participants were asked to rate the successfulness of their conference using a Likert scale from 1 (very unsatisfied) to 5 (very satisfied). An independent samples T-test was run to determine the relative degree of conference satisfaction between online clients who had experienced technical problems during their conferencing session and those clients who had not experienced problems. The mean for clients who had experienced problems was 4.58 compared to a mean of 4.87 for clients who had not experienced problems. This difference was not statistically significant (sig. = .556): both groups expressed high levels of satisfaction with their online conferencing experience.

Likelihood of Online Clients to Meet Online in the Future

Given the frequency of technical problems during online sessions, some so severe that the session could not be conducted, it is reasonable to conclude that some clients would be so dissatisfied that they would not use the service again. To determine whether online clients would be likely to conference online again, survey data were analyzed. Online survey participants were asked, using a Likert scale of 1 (very unlikely) to 5 (very likely), to express the likelihood of meeting for another conference online. The mean score was a 4.58 and the mode was 5, indicating that most clients were likely to schedule another appointment online.

Data was further broken down into clients who had experienced technical problems during their online conferencing session and clients who had not experienced technical problems during their online session to determine whether problems with technology significantly affect the willingness of clients to schedule future online conferences. The mean score for the client group that had experienced problems was 4.53 while the mean score for client group that had not experienced technical problems was 4.61; the mode for both groups was 5. While there appears to be some difference between these groups, when the data was analyzed, the difference was determined not to be statistically significant (sig. = .622).

It seems surprising that so many clients who had experienced technical difficulties during their online conference would express a willingness to use the service again; however, many clients stated in their write-in responses that they would use the online service again despite the problems. The following response is representative: “Even though I had technical problems, I would use online tutoring again because of the convenience. I am not tech savvy, so I might have done something wrong on my end.”

Clients often blamed technical problems on their equipment or their unfamiliarity with the conferencing technology. One ESL client related that the first time she tried to meet online, she was unable to connect even after having tried for almost an hour. She blamed this on her “new computer” that “didn’t have all the things that [she] needed to download programs.” The second attempt she characterized as “great . . . I got right into the room.” Despite her initial problems meeting online, the client persisted and has become a regular online user. In fact, all but one of the online clients interviewed for this study had used the service five or more times.

It appears that despite technical problems during initial sessions, many clients want to conference online again. One online client phoned his tutor because he had not received a link to his session; once he received the link and got into the session, his cable internet connection failed. He then called the tutor and stated he would take his laptop to the nearest Panera Bread and get back online. Since the conference was at noon, Panera Bread restricted his online access to 30 minutes, which was not enough time, given the length and complexity of his paper. Undeterred by these problems, the client thanked the tutor and requested another online appointment for the next morning. That conference went smoothly from start to finish. As clients repeatedly state, the convenience and flexibility of the online option make it appealing. In a similar study of synchronous online conferencing, Jo Ann Griffith observes, "Writers are willing to trade some degree of overall satisfaction for online convenience" (2008, p. 42). Though some of the clients interviewed for this study stated a preference for face-to-face conferences, they all felt that their online conferences permitted them to accomplish their writing center conference goals and considered that to be their bottom line.

IMPLICATIONS

This quantitative study sought to provide new insights related to online writing center client demographics and synchronous online conferencing. Specifically, it sought to determine whether significant demographic differences exist between writing center clients who choose to conference face-to-face and clients who choose to conference online. In addition, it describes face-to-face and online client preparedness as well as help sought by face-to-face and online clients. Online client perceptions of the conferencing experience were measured against face-to-face client perceptions of the conferencing experience to determine the efficacy of online conferencing. To that end, clients were asked to assess several aspects of their conferencing session including the knowledge, helpfulness, and communication skills of their tutor. Clients were also asked whether their writing conferences resulted in an improved paper and whether their writing skills had improved as a result of their conferences. Finally, the study quantified online client use of platform features as well as problems experienced during the client's online session and the likelihood of online clients choosing to conference synchronously in the future. The goal of the study has been to develop a clearer picture of synchronous online clients, their conferences, and their perceptions of those conferences. The information uncovered through this study creates a picture of synchronous online clients and conferences and should aid directors in determining whether such a service would be a benefit to their client population.

The reason most frequently given for expanding writing center conferencing services through the addition of an online conferencing component is that clients whose participation in writing conferences has been marginalized due to the center's hours or

physical location will make use of such a service. University of Central Florida writing center director, Rusty Carpenter feels that his center's synchronous service allows the center to "reach out to students" who would not typically use the center's services. Included in that group are "students with families and children, working professionals, commuters, physically challenged students, and students who rely on alternative forms of transportation" (2007). This assumption was examined through the creation of null and alternative hypotheses designed to determine whether clients conferencing online exhibited demographic characteristics that were similar to or different from clients conferencing face-to-face.

Clients who chose to conference online exhibited similar demographic characteristics to clients who chose to conference face-to-face in many areas including degree program, employment status, travel time to campus, household status, and technology skills. Statistically significant differences were found in relation to gender, age, and ethnicity: men are more likely conference online than women; younger clients or more likely to conference online than older clients; and Caucasian/white clients are more likely to conference online than African-American/black clients. ESL and ELL clients are less likely to meet online than either Caucasian/white clients or African-American/black clients. From this data, it is clear that the addition of an online service may increase diversity in relation to gender but does not increase participation in relation to ESL and ELL students.

Clients conferencing online were determined to be slightly more prepared for their conferencing sessions than clients conferencing face-to-face. More online clients had read the assignment, created multiple drafts, and had submitted a paper in advance of

their conference than had face-to-face clients. Writing assistance sought by both client groups, face-to-face and online, was essentially the same. The only item that demonstrated a statistically significant correlation with a specific population was spelling. The relative ranking of the seven items that clients could choose from in relation to assistance sought was identical for face-to-face and online participants: APA, grammar, organization, transitions, spelling, development, topic organization. In stark contrast to statistical data, client interviews and write-in responses mentioned higher-order concerns more frequently than lower-order concerns such as grammar or spelling. Help with organization and “flow,” followed by sentence syntax, were mentioned most frequently in write-in responses and client interviews. In post-session online conferencing logs, tutors did, however, discuss patterns of error related to clients with whom they had worked. One tutor stated that she felt grammatical errors were “easily addressed” during online conferences using the “‘find’ feature in Word to locate errors” and then having the client correct those errors. She also expressed hope that the client would employ a similar strategy when working on his own.

Conference perceptions also did not vary greatly between face-to-face and online client participants. No statistically significant difference was found in relation to the following perceptions: comfort level with tutor, tutor communication skills, paper improvement, writing skills improvement, and overall successfulness of the conference. Only two items, tutor helpfulness and tutor’s knowledge of writing skills, demonstrated a statistically significant difference between face-to-face and online conferencing clients. In both these cases, there was a positive correlation with online conferencing. However, online clients may be responding to the tutor’s helpfulness in relation to navigating the

online conferencing platform as well as the tutor's helpfulness in relation to with writing. It is also possible that the tutor's greater knowledge of the online conferencing platform could be a contributing factor to the statistically significant difference in mean scores between face-to-face client participants and online client participants in relation to "my tutor was knowledgeable about writing." More significant than these differences is the finding that client's conferencing online were as satisfied with the conferencing experience as clients meeting face-to-face.

This finding is similar to that reported in Jo Ann Griffin's study (2008) which compared face-to-face writing center conferences with synchronous online PC and tablet conferences employing Connect, a platform that is very similar to Elluminate. Griffin's study took place at a "mid-western commuter campus": 26% of the students at that campus attend school part time and approximately 50% of the student population lives on campus. The study tracked ten consultants and 31 writers, mostly graduate students, who agreed to complete pre and post conference questionnaires. Using a 5-point Likert scale, similar to that used in this study, online clients were asked to rate the successfulness of their conferences, 1 (very unsuccessful) and 5 (very successful). The mean score was 3.94 for face-to-face clients and 3.56 for online clients, a difference that was not statistically significant. In relation to comfort level during conference, the mean score for Griffin's clients conferencing face-to-face was 4.22 compared to a mean score of 4.06, for clients conferencing online, a difference that is not statistically significant.

In relation to synchronous conferencing tools, tools that enable learner-centered instruction, tutor-client conversation, and collaborative learning were used most frequently during online conferences at the host institution. Application sharing, VoIP,

and text chat were used in the majority of online sessions. These tools enable writing center tutors to conduct online conferencing sessions in accordance with proven pedagogical practices. VoIP promotes dialogic exchanges between tutor and client, encourages probing and questioning, and facilitates client-led conferencing. Tutors and clients interviewed for this study stated that online conferences typically began with the client setting the conference agenda in response to a tutor prompt such as “What would you like to work on today?” After having addressed the client’s concerns, tutors typically addressed higher order concerns related to content, logic, and organization before moving to lower order concerns such as sentence syntax, diction, and grammar. This structure follows established face-to-face conferencing protocol.

Application sharing, which allows tutor and client to scroll through the document and engage in revision practices, was the most frequently used synchronous conferencing feature. This technology feature changes the conferencing session in substantive ways. In face-to-face conferencing, clients often take notes but rarely engage in actual revision of their texts. When face-to-face clients do revise, it is usually on a micro rather than a meta-scale involving changes in sentence syntax or correction of grammatical errors. During online conferences, clients appear to revise more frequently, often moving large sections of text in response to organizational problems. This behavior was also observed in Jo Ann Griffin’s study. “Writers . . . want very much to get as much work done on their texts as possible in the time available,” Griffin remarks (2009, p. 26). Tutors taking part in synchronous conferences at the host institution also felt that application sharing led to greater client engagement.

Two synchronous conferencing tools, conference recording and video, were used infrequently during this study. Due to limited funding, only online writing center clients who used the service during the 2008 academic year, received a link to a video recording of their session. Of those clients who did receive a recording link, 37% reported using the link to review their conference. Reviewing the conference promotes what Schön has termed “reflection-on-action,” a metacognitive practice wherein an individual reviews and reflects on a previous learning experience. Tutors, too, engage in metacognitive reflection and learning when they revisit their session via a video recording. Given the significance of this tool in relation to reflective learning, synchronous platforms that provide video conference recording should be adopted in preference to those that do not offer this feature.

Though this study’s protocol initially included tutors and clients receiving and broadcasting video during the synchronous conferencing session, this requirement was dropped early in the study. At the time this study began, Elluminate did not offer synchronous two-way video broadcast. Either the tutor could transmit video to the client, or the client could transmit video to the tutor. In Jo Ann Griffin’s study of face-to-face, PC, and tablet conferences, she found that when tutors and clients conferencing synchronously online had “unequal tools,” conferencing sessions tended to be directive rather than collaborative. Unequal tools led to an imbalance in power that created a hierarchy. This imbalance was observed in the host institution’s study, as well, and was the primary reason that video broadcasting was omitted from the study. Secondary reasons, however, are also worth mentioning.

Tutors as well as clients were reluctant to use the video cameras. Tutors, who often conference from home, enjoy being able to conference without worrying about their appearance. Some clients felt that a video camera would be an intrusion into their home and an unwanted temptation for teenagers within the home. Clients, like tutors, also did not want to dress for the camera. One client, who had used the video camera during a conference, made the observation that broadcasting video is significantly different from seeing someone and working with someone face-to-face. In most conferencing programs, the individual who is broadcasting video is able to see himself, something that is quite different than from face-to-face communication. One tutor remarked that seeing herself during the session was a distraction. Most tutors preferred to keep the visual focus on the text and one tutor remarked that doing so kept the session focused. Finally, video transmission requires substantial bandwidth and can adversely affect VoIP and application sharing. Though video can personalize the conference, particularly when the conferencing session begins, using it throughout the session may be problematic. Writing center directors considering expanding their services to include online conferencing, may want to test this feature before investing in high resolution web cameras.

Even with the video component eliminated, technical problems occurred frequently during online conferencing sessions; however, despite persistent technical problems tutors and clients alike generally felt that their online conferences were successful. "I never had a terrible conference," one tutor stated in relation to the online conferences she had hosted, "Although technical problems were discouraging, the student and I were able to find a satisfying 'work-around' and continue the session." Tutors and clients reported that online conferencing sessions were successful even when significant

technical problems had occurred during the session. In Griffin's study of face-to-face, PC, and tablet conferencing, tutors also felt that their online conferencing sessions were successful: in only 2 out of 33 online conferencing sessions did tutors report "dissatisfaction with the conference overall" (2008, p. 30). These results corroborate the findings of the host institution study.

Three of the eight online clients interviewed at the host institution stated that they preferred conferencing face-to-face, three clients stated they preferred conferencing online, and the remaining two clients felt that face-to-face and online conferences were "about the same." Tutors did not express a clear preference for either face-to-face or online conferencing sessions. In Griffin's study, tutors overwhelmingly preferred face-to-face conferences; however, 43% of the clients preferred online conferences, 30% of the clients did not have a preference, and just 27% of the clients preferred face-to-face conferencing (2008, p. 24). Griffin attributes the client preference for online conferencing to "ease of use" and "convenience" which are "overriding concerns" (2008, p. 25). Griffin's findings again substantiate those of this study. All of the clients in the host institution study stated that conferencing online was more convenient than conferencing face-to-face and was the primary reason they had chosen to conference online.

Synchronous Conferencing: Concerns and Considerations

Synchronous online writing center conferences clearly fulfill a need, allowing busy nontraditional students to meet with a writing tutor from the comfort of their own home. Furthermore, these conferences have been determined to be pedagogically sound and consistent with writing center praxis. Even so, there are factors writing center

directors should consider before they decide to go online with a synchronous conferencing program.

Writing centers at colleges and universities with a traditionally-aged, residential client population may find that providing online conferencing in addition to face-to-face conferencing is unnecessary; however, writing centers that serve large numbers of nontraditional students, commuting students, or online students should consider adding such a service. Accreditation of online programs often requires that the college or university provide distance education students with the same support services available to residential students (Carino, 1998; National Center for Public Policy, 2008; Santovec, 2005). In such instances, it may be better for writing center directors to chart a course for online learners rather than have a course charted for them. Muriel Harris remarks in relation to online education: “The train has left the station and is powering down the tracks” (1992, p. xv). Writing center directors should not be left standing on the station platform: they should be the conducting the train, taking the lead, and adapting writing center practices and pedagogy for online learners.

Writing center directors who decide to implement a synchronous online conferencing center or a supplementary synchronous conferencing service should be aware, however, that such services can be costly in terms of human and financial capital. In “The Spotted OWL” (2000), Mike Shadle reported that 60% of OWL builders were writing center directors and that 90% of OWL builders admitted that they lacked the necessary training, equipment, and support to build and maintain an OWL. Almost a decade later, little has changed. OWLS and online conferencing components are generally developed by writing center directors. The writing center director and staff who

choose to implement a synchronous conferencing service generally are responsible for finding and testing suitable technology platforms. This was the case at the host institution and is the case, according to Stephen Neaderhiser and Joanna Wolfe (2009), at most institutions today. The writing center director and staff must be willing to take on this additional work without additional pay.

The financial cost of offering such a service must also be carefully considered. Results culled from the most recent Writing Center Research Project showed that “Many OWLS received funding for an initial pilot program and were not sustainable” (2009, p.65). Three-fourths of writing centers offering online services reported no funding for those services, nor did they receive any additional help in relation to staffing. (Neaderhiser & Wolfe, 2009). Writing center directors opting for subscription conferencing programs that offer premium services, such as session recordings, may find funding difficult to maintain. A number of free conferencing services are available, including Skype and DimDim; however, directors should check with their institution’s IT department to determine whether their college or university permits the use of such platforms. Many colleges and universities insist on greater security measures than these platforms offer.

Any program that is being considered for adoption must be tested and evaluated by the director and staff. Mock conferences should be held and systems should be tested on multiple computer operating systems and computers using various internet connections, including dial-up. Client focus groups should be consulted as well. Conducting usability testing is a time consuming step, but a necessary one. Once a conferencing platform has been chosen, tutors and clients will acclimate to it and will be

resistant to future changes. Chances are that the synchronous conferencing platform that is initially chosen will be in use for years to come: directors must choose carefully.

Directors will also need to design and develop a training program as well as online session protocols. Before tutors conference online with clients, they must be briefed on session protocol, trained via mock sessions, and observed during practice conference sessions. A tutor should not host a session solo until both the director and the tutor feel confident that the tutor will be able to handle unexpected technical problems during the conferencing session. Tutors must “develop personas that convey feelings of comfort, and intellectual engagement” (Carpenter, 2008, p. 1). They must feel comfortable online and must be able to convey that comfort to clients when problems occur.

A final consideration for writing center directors seeking to expand their center’s services through the implementation of a synchronous online conferencing component is the amount of time necessary for such a service to become successful. Adoption of new technologies is a slow process, particularly when a significant portion of the client population can be classified as digital immigrants. At the host institution, online client usage grew slowly: 1 client in fall 2007, 9 clients in spring 2008, 47 clients in summer 2008, 74 clients in fall 2008, and 85 clients in spring of 2009. Many writing centers give up on their online service after a semester or two seeing low usage numbers as indicative of a lack of interest (Marshall, 2005; Neaderhiser & Wolfe, 2009). However, as is evident from the host institution study, synchronous online conferencing programs develop slowly; however, they often become successful if the writing center director understands the pace with which technology is adopted. At present, approximately a third

of all writing center conferences at the host institution are synchronous, and use of the synchronous conferencing program has grown every semester since its inception. “Allow plenty of time,” Inman advises, and “anticipant reinvention” (2004, p. 288). As this study demonstrates, directors must be flexible in order to successfully launch a service. During this study, numerous changes were made in response to wide-range of concerns, some theoretical, some practical. Writing center directors must be flexible and “regard any decisions as subject to future considerations” in order to successfully launch a synchronous online conferencing service (Inman, 2004, p. 288).

Benefits of Synchronous Conferencing

Writing center directors usually implement a synchronous conferencing service component in order to expand center services to client populations that either are not currently using the center’s conferencing services or are using those services infrequently. There is little evidence that clients who choose to meet synchronously online are unable to meet face-to-face. Though it would be less convenient, most online clients could conference with a tutor face-to-face. Seven of the eight online clients interviewed at the host institution had met previously with a writing center tutor during a face-to-face conference; however, all reported that since the advent of online conferencing, they had met more frequently with writing center tutors. These clients often supplemented their face-to-face conferencing sessions with weekend online conferencing session. They all felt conferencing online was more convenient than conferencing face-to-face.

Conferencing online is more convenient for most students, even single students who do not have families or full-time jobs, and though few in number, there are some

students who would not have scheduled a writing center conference had the online option not been available. One of the eight clients interviewed for this study had never participated in a face-to-face conference and would not have conferenced with a tutor had it not been for the online service. Some online-only clients may also eventually try the face-to-face conferencing as a result of their online conferencing experiences. At the host institution, the number of conferences conducted per semester, both face-to-face and online, grew substantially during this study: fall 2007, 295 conferences; spring 2008, 322 conferences, summer 2008, 154 conferences; fall 2008, 361 conferences; spring 2009, 431 conferences, and summer 2009, 295 conferences. This growth is substantial, given that the student population at the host institution remained relatively constant during the study, hovering at approximately 1,200 students. The increase the center experienced in the number of conferencing appointments may be due in part to the additional exposure and conferencing hours provided by the synchronous conferencing service.

Synchronous online conferencing enables a substantial expansion of writing center hours, without a similar expansion in budget. As anyone who has ever worked in a writing center can attest, the conference schedule is driven by the academic calendar. At the beginning of each session or semester, relatively few students use the writing center, but as the semester progresses and papers become due, the center becomes increasingly crowded, particularly during midterms and finals. Since synchronous online conferencing is offered by appointment only, tutors are paid only for hours during which they are actually conferencing. This allows the writing center to expand its services at peak times without expanding the hours of the brick-and mortar center. It also allows tutors to meet with students during late evening or weekend hours on an “as needed” basis, permitting

the writing center “to expand to meet perceived needs” of the client base and “adjust to changing conditions” of the academic schedule (Harris, 1992, p. 164). Expanding center hours without expanding the physical size of the brick-and-mortar center is particularly important at campuses where space is at limited. According to Rusty Carpenter, director of the writing center at Central Florida University, “virtual spaces can provide the ‘room’ for writing centers to expand,” providing an “optimal solution for writing centers that are dealing with the inadequacies of their physical space” (2008, p. 3).

The virtual space provided by synchronous online conferencing, for many students, is a natural extension of a digital landscape that they know well. Digital natives are “comfortable not only composing and revising but also sending, receiving, and responding to text electronically” (Healy, 1995, p. 183). Indeed, some digital natives, and even digital immigrants, are more comfortable composing on the computer than they are composing with pen and paper (Culligan, 2008). Online writing center clients often type notes directly into their document or revise during their session. In addition, tutors and clients conferencing online can virtually visit the university library and access databases to conduct additional research or check sources to confirm citation information. Clients who are unfamiliar with technology often ask for and receive help with word processing problems, such as inserting page numbers and formatting a table of contents.

There is also evidence to suggest that clients who conference online using VoIP and application sharing technologies are as engaged, if not more engaged, than clients who conference face-to-face in the writing center. Jo-Ann Griffin’s study comparing writer engagement during face-to-face conferences to writer engagement in synchronous online conferences employing VoIP and application sharing found that writers were

equally engaged in their sessions.¹⁵ At the host institution, tutors frequently remarked that clients were “more engaged” and more willing to revise their work during online sessions.

Final Thoughts

Synchronous online conferencing allows tutors to follow the proven pedagogical practices of face-to-face conferencing when conferencing with a student online. Both face-to-face and online conferencing promote a dialogic exchange between tutor and client that leads to metacognitive growth and a corresponding enhancement of writing skills. Client perceptions of the conferencing experience at the host institution were strongly positive for both face-to-face and online conferencing. Though clients from under-represented populations were less likely to meet online than other clients, several frequent users of the online service at the host institution are members of marginalized groups. They conference online, as do other online clients, because it is more convenient for them than conferencing face-to-face.

Convenience is important to nontraditional students who often must juggle the competing demands of work, family, and college; however, as this study has shown, even young, single clients value the convenience of conferencing online. In “Straddling the Virtual Fence” (1998), under a section heading entitled “When are some things patently absurd?,” Eric Hobson relates the story of one synchronous chat conferencing session that has become “legend”:

Two students were using the center’s computers in [an] adjacent room; one printing a paper; one “talking” online. Glancing at the screen, the director realized

¹⁵ Nine face-to-face and online sessions were observed and rated in relation to client engagement using a Likert 1 (strongly disagree) to 5 (strongly agree) scale. The mean score for face-to-face and online PC clients was identical, 4.33.

with a jolt that the student was talking to the tutor sitting fewer than twenty feet away, a situation the tutor was not aware of. The student had opted for the online tutorial online tutorial because, “I wanted to be able to leave anytime without feeling guilty. And I thought I could just get my questions answered and not have to talk about all the other stuff the tutors always want to talk about like who I’m writing to and why I need more info. (p. 487).

While conducting this study, I frequently thought about this passage and the scenario it depicts, a scenario that is so “absurd” that it is presented to readers without comment. Since I know and appreciate the importance of the “stuff” the student is, apparently, not wanting to discuss, this passage haunted me. Would synchronous online conferencing be used by students who could just as easily conference face-to-face? Would clients meeting online be less receptive to tutor suggestions, particularly suggestions related to higher-order concerns such as content and audience? Was I promoting a pedagogical practice that was fundamentally unsound?

In rethinking this passage, I found myself reflecting on my own perceptions and prejudices. Even though I was launching a synchronous online service, I knew intuitively that conferencing online was inferior to conferencing face-to-face. Furthermore, I also knew – or felt I knew – that those students who could meet face-to-face would be better served by doing so. Student who are on campus, who can conference face-to-face really has no business conferencing on line, do they? In thinking about this question and about the scenario Hobson relates, I have confronted my prejudices and arrived at new conclusions about the client Hobson describes and about online conferencing.

First, while the client Hobson describes could have easily met face-to-face, she did not. She did not because she was afraid that she would feel “guilty” when she attempted to end the conference after her questions had been “answered.” How many of us have experienced something similar? How many of us have gone to a meeting that lasted too long, a meeting that we wanted to leave but could not leave because we were afraid that those in charge of the meeting, the boss perhaps, would reprimand us? That is precisely the scenario the student describes. The student wanted to direct her session, to be in control of the conference, and to determine when she would leave the session; however, she clearly recognized that the tutor is in control of the conferencing session. She cannot comfortably leave the session until “the boss,” in this case her tutor, has given her permission to do so. The student wanted to get *her* questions answered. That the student is asking questions and directing the course of her session should not be a cause of concern. On the other hand, this client’s reluctance to conference with a tutor face-to-face because of prior experiences should be a cause of concern. Had the online conferencing option not been available, this client may well have decided to skip a writing conference altogether.

Clients, such as the one Hobson describes, conference online not because they live far from campus, or because they have children, or because they have a full-time job: they conference online because they prefer to conference online. In this case the client clearly felt that her online sessions were more democratic, giving her greater control of the conferencing session. Should this client’s decision to conference synchronously online when she could have easily chosen to conference face-to-face trouble directors who are considering offering a synchronous service? Possibly. Some may argue that had

this client met face-to-face she would have been forced to confront fundamental issues in her paper that online conferencing allowed her to evade. Maybe. However, there is no guarantee the student would have listened to such advice even if it were given. The student's reluctance to conference face-to-face signals previous conferencing sessions during which, in all likelihood, the student "shut down" having reached the saturation point, a point that some tutors routinely reach as they attempt to "fix" all the "problems" in the student's paper.

Do not mistake me: I am not defending this student's refusal to discuss high-order concerns. However, I am defending her right to conference online – regardless of reason. If a synchronous conferencing service exists in concert with a face-to-face conferencing service, clients should be able to choose the platform that they feel best suits their needs. Both face-to-face conferencing and online conferencing have distinct advantages and disadvantages. Many of the clients at the host institution have never tried the online service and manifest a strong preference for face-to-face conferencing. Other clients have never conferenced face-to-face, preferring the convenience of conferencing online. Still other clients combine face-to-face and online conferencing, enabling them to attend more conferences.

"More" should be the operative word when considering offering a synchronous online service. Synchronous conferencing provides writing center clients with more options. Given that synchronous conferencing has been shown to be collaborative, effective, and in keeping with sound pedagogical practices, synchronous conferencing should not be discouraged, particularly since some students would not attend a writing conference if the online option were not available. Synchronous online conferencing is

not a substitute for face-to-face conferencing, but it is a valuable addition to it. More conferences result in more learning. Given the results of this study, it is hoped that more writing centers will consider starting a synchronous service in the future.

APPENDIX A: Client Survey



*** Required Information.**

page 1

The Writing Center is always working to improve the quality of its service. Our records indicate that you recently visited the Writing Center. Through this survey, the Writing Center hopes to determine the types of students using our services, ways in which we can improve our services, and the quality of the service you received.

1. Please select your degree program..

- Master's of Business Administration
- Master's of Education
- Master's of Information Systems Security
- Bachelor's of Professional Studies
- Dual degree
- No degree program

2. Select the age group that best describes you.

- 18-24
- 25-34
- 35-44
- 45-54
- 55 and older

3. Gender:

- Male
- Female

4. Using the drop-down menu, choose the category that best describes your ethnicity.

- White
- Black/African American
- Latino/Hispanic
- Asian/Pacific Islander
- American Indian/Alaskan Native

Not listed

5. What is your employment status?

- Full-time
- Part time
- Not in the labor force

6. When traveling to CGPS, where do you come from?

- Work
- Home
- Other location

7. What is the average travel time from home or work to CGPS?

- Under 30 minutes
- 30 to 59 minutes
- 60 to 89 minutes
- More than 90 minutes

8. Please pick the household status that best describes you.

- Single
- Single parent
- Married without children
- Married with children
- Not listed

9. How many computers do you have in your home?

- None
- One
- Two
- Three or more

10. How would you describe your technology proficiency? (Select one option)

Not proficient 1	2	3	4	Extremely proficient 5
<input type="radio"/>				

*** 11. Did you meet with a writing center consultant face-to-face at the Writing Center or online?**

- Face-to-face
- Online

Go to Page No. 4
Go to Page No. 2

12. What type of internet connection were you using?

- DSL
- Cable
- LAN
- Dial-up
- Satellite
- Not listed
- Don't know

13. Using the list below, select all the reasons you decided to use the online service.

- Unable to come to the writing center
- On travel at the time of the appointment
- Child care difficulties
- Feel more comfortable meeting online
- Prefer to do things online
- More convenient overall
- Other (please specify) _____

14. Tell us about your online conference:

	Yes	No
(a) Were you able to speak with your tutor? (Select one option)	<input type="radio"/>	<input type="radio"/>
(b) Were you able to view your document? (Select one option)	<input type="radio"/>	<input type="radio"/>
(c) Did you use the chat feature during your conference? (Select one option)	<input type="radio"/>	<input type="radio"/>
(d) Did you use a web cam for your conference? (Select one option)	<input type="radio"/>	<input type="radio"/>
(e) Did you review your session online after the conference? (Select one option)	<input type="radio"/>	<input type="radio"/>

15. How likely is it that you will conference online again? (Select one option)

Very unlikely 1	2	3	4	Very likely 5
<input type="radio"/>				

*** 16. Did you experience any difficulties relating to the technology during your session?**

- Yes
- No

Go to Page No. 3
Go to Page No. 4

17. Briefly describe the problems you experienced:

18. Did your instructor require that you conference with a tutor at the Writing Center? (Select one option)

Yes

No

19. Did you have a scheduled appointment or did you walk-in?

Appointment

Walk-in

20. How prepared were you for your conference? Check all that apply.

I had read the assignment sheet

I had made notes about the paper

I had created a first draft of my paper

I had created multiple drafts of my paper

I brought or submitted a copy of the assignment sheet to the conference

I submitted a copy of the assignment sheet online

21. Did you submit your paper through the Digital Drop Box? (Select one option)

Yes

No

22. Reason(s) for conferencing with a Writing Center tutor (click on all that apply):

Assistance with developing a topic

Help developing ideas

Help improving organization

Assistance with proofreading

Help identifying grammatical errors

Help identifying spelling errors

Assistance with APA format

Help with transitions

Attendance required

Other (please specify) _____

18. Did your instructor require that you conference with a tutor at the Writing Center? (Select one option)

Yes

No

19. Did you have a scheduled appointment or did you walk-in?

Appointment

Walk-in

20. How prepared were you for your conference? Check all that apply.

I had read the assignment sheet

I had made notes about the paper

I had created a first draft of my paper

I had created multiple drafts of my paper

I brought or submitted a copy of the assignment sheet to the conference

I submitted a copy of the assignment sheet online

21. Did you submit your paper through the Digital Drop Box? (Select one option)

Yes

No

22. Reason(s) for conferencing with a Writing Center tutor (click on all that apply):

Assistance with developing a topic

Help developing ideas

Help improving organization

Assistance with proofreading

Help identifying grammatical errors

Help identifying spelling errors

Assistance with APA format

Help with transitions

Attendance required

Other (please specify) _____

*** 28. I am over 18 years of age, and wish to participate in the program of research being conducted by Dr. Jane Donawerth of the University of Maryland and Cheryl Hawkinson Melkun, the CGPS Writing Center Director. I understand the information gathered from this study is confidential and that data collected from this study will be grouped with other data in order to provide a better understanding of writing centers and the needs of non-traditional students. Note: You should close your browser after you submit the survey to help maintain the confidentiality of your responses.**

Yes

No

APPENDIX B: Writing Center Form



THE **WRITING** CENTER
AT THE COLLEGE OF GRADUATE AND PROFESSIONAL STUDIES

Name: _____ E-mail: _____

Instructor: _____ Assignment: _____

Course: _____ Date: _____

Face-to-face

Online

Student's area of concern:

Summary of tutoring session:

Tutor: _____

Writing Center Director: 286-8092

APPENDIX C: Permission Form

Project Title: Meeting the Needs of the Non-traditional Student: A Study of the Effectiveness of a Synchronous Online Writing Center

I am over 18 years of age and wish to participate in a program of research conducted by Dr. Jane Donawerth at the University of Maryland, College Park, and Dr. Leigh Ryan also of the University of Maryland, College Park, and Cheryl Hawkinson Melkun, CGPS Writing Center Director. The purpose of the research is to determine the effectiveness of a synchronous online writing center.

The procedures involved in this study include analysis and transcription of tutoring session transcripts; analysis and transcription of interview transcripts; and analysis and collection of survey data.

All information collected in this study is confidential to the extent permitted by law. I understand that data I provide will be grouped with data others provide for reporting and presentation and that my name will not be used.

I understand that this study is designed to help the investigator determine the effectiveness of a synchronous online writing center in relation to meeting the needs of non-traditional students. I am free to ask questions or withdraw from participation without penalty and without losing the benefit of any writing center services.

Contact Information: Cheryl Hawkinson Melkun, 121 University Blvd., Fredericksburg, VA 22406
Phone: (540) 286-8092

Name of Subject:

Date

Signature of Subject:

APPENDIX D: Interview Questions for Clients

1. What program, if any, are you enrolled in at CGPS?
2. What prompted you to use the online service?
3. What steps did you take to prepare for your conference?
4. Could you give me a brief overview of your conference and how it progressed?
5. Were you able to address the concerns that prompted you to schedule the conference?
6. Do you feel your paper improved as a result of the conference? If so, in what way?
7. What, if anything, do you feel you learned about writing during the conference?
8. What aspects of the conference went well?
9. What could have been improved upon?
10. Would you schedule an online conference again? Why or why not.
11. Is there anything else you would like me to know about your online conferencing experience?

APPENDIX E: Interview Questions for Tutors

1. Approximately how many conferences have you conducted online?
2. How do your conferences usually progress?
3. Do you feel that an online conference is as collaborative in nature as a face-to-face conference? Why or why not?
4. Do you change your individual conferencing style when meeting with someone online?
5. Do you feel that online conferences are more, less, or about the same as face-to-face conferences in relation to being directive (giving specific directions to the client)?
6. What advantages do you see in relation to online tutoring?
7. What disadvantages do you see in relation to online tutoring?
8. Are there any issues or concerns that you feel are best addressed in a face-to-face conference?
9. Are there any issues or concerns that you feel are best addressed in an online conference?
10. Are there any specific aspects in relation to clients that make them better suited for either face-to-face or online conferencing?
11. Is there anything else you would like me to know about online conferencing?

APPENDIX F: Tutor Online After-session Log



*** Required Information.**

page 1		
1. Where did you conduct the conference from?		
<input type="radio"/> Home <input type="radio"/> CGPS <input type="radio"/> Other		
2. What type of internet connection were you using?		
<input type="radio"/> DSL <input type="radio"/> Cable <input type="radio"/> LAN <input type="radio"/> Dial-up <input type="radio"/> Satellite <input type="radio"/> Not listed <input type="radio"/> Don't know		
3. Tell us about the online conference:		
	Yes	No
(a) Were you able to speak with the student? (Select one option)	<input type="radio"/>	<input type="radio"/>
(b) Were you able to view the student's document? (Select one option)	<input type="radio"/>	<input type="radio"/>
(c) Did you use the chat feature during the conference? (Select one option)	<input type="radio"/>	<input type="radio"/>
(d) Did you use the web cam for your conference? (Select one option)	<input type="radio"/>	<input type="radio"/>
* 4. Did you experience any difficulties relating to technology during your session?		
<input type="radio"/> Yes	Go to Page No. 2	
<input type="radio"/> No	Go to Page No. 3	

5. Briefly describe the technical difficulties you experienced during the session:

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