FACTORS INFLUENCING FACULTY ADOPTION OF WEB-BASED COURSES IN
TEACHER EDUCATION PROGRAMS WITHIN THE STATE UNIVERSITY
OF NEW YORK

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Factors Influencing Faculty Adoption of Web-based Courses in Teacher Education Programs Within the State University of New York

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(ABSTRACT)

This study sought to identify factors that influence the adoption of Web-based courses by State University of New York faculty members engaged in professional development and preparation of teachers. The central question of this research study was: What factors and concerns affect State University of New York teacher education faculty members’ decisions regarding development and implementation of Web-based courses?

The study addressed issues raised during earlier research efforts on the objections, problems, or barriers to the use of distance learning during the academic preparation of teachers. Earlier studies revealed technical barriers surrounding the perceived reliability or unreliability of hardware components or software available to instructors. Non-technical problems centered on professional objections to online courses. Job security, intellectual property rights, course control, and the constant requirement to learn or maintain new skills were listed as concerns by faculty. Implementation of Web-based courses also required a training period for faculty.

Teacher education programs found within the State University of New York were selected as the focus of this study due to the availability of a structured resource for faculty seeking to develop and present online courses to their students. State University of New York faculty respondents in these programs were experienced educators who viewed Web-based teaching within the context of pre-service teacher preparation as important or very important but were concerned about "quality" issues such as student discussion or interaction, the suitability of course content, and concerns that more time is needed to prepare online courses without any corresponding support or policy guidance from institutional administration.

Few courses were offered to pre-service teachers in the setting that was studied. Many respondents viewed the use of Web-mediated instruction as inconsistent with the requirements of pre-service classroom observation or other efforts to develop teaching skills. Several respondents reported that they had no online teaching experience but indicated some exposure to online teaching resources. This would suggest that hybrid courses (a mix of classroom contact supported by Web-based classes) should be explored.
Dedication

If I can line up the people who, back through the ages, have gone at life in ways I greatly admire, then I can feel their strength supporting me, all their standards and values point the way in which I am to go.

Bonaro W. Overstreet

Light from Many Lamps
by Lillian Eichler Watson (Editor)

The work that I have set to paper is dedicated to many people who have influenced my life. In particular I dedicate it to

**MY DOCTORAL COMMITTEE IN HEAVEN**

† **Commander William O. Hill** and
† **Marie Donovan Hill**, my parents.

The love and support a parent shows does not cease when they leave this world; rather it grows stronger and more powerful. I view my parents in a whole new light; I am a parent now. They were my inspiration and my greatest supporters who believed, based on their love, that I could do anything. Thank you.

† **Dr. J. Edward Petty** – Professor of Education, Lynchburg College (Virginia).

During my Master’s work at Lynchburg College, Ed was the first to encourage me to seek the doctoral degree. He could see something in me that even I was not aware of at the time – the desire to learn more!

† **Dr. Nevin R. Franz, Jr.** – Professor of Education, Virginia Tech.

Nevin had a unique talent for making a person feel at ease, special, and truly a “colleague” in vocational technical education. His knowledge was extensive; just as extensive as his interest in life and people.

† **Dr. Margaret Moore**

† **Dr. Patricia Werth**

Margaret and Pat were colleagues and companions in my doctoral journey at Virginia Tech. Each was so very special to me. Each was the victim of a drunk driver.

Margaret was perhaps the hardest worker I have ever seen—I know she was tired, she had every reason to be, but she kept right on going (and always with a smile).

Pat was a woman who was most inspiring because of her tremendous love of family. There is nothing she wouldn’t do for any family member. It is my belief that this love also extended to friends.

I miss all of you so much and I find my journey is that much lonelier for you not being here by my side.

*May perpetual light shine upon you.*
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I am not a teacher; only a fellow traveler of whom you asked the way. I pointed ahead—ahead of myself as well as of you.

George Bernard Shaw (1856-1915)
British dramatist, critic, writer

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* * * * * * * * *

Encouraging and assisting me every day was my husband, John, a retired Coast Guard Chief.Years ago when I was faced with a particularly difficult challenge, his advice was “You’re a chief’s wife—you can do anything.” I’ve lived by that “motto” through some very difficult times and always, I hope, rose to the occasion. This doctoral process was not easy for John but despite not understanding what it was all about, he never stopped believing in me. No wonder we’ve been married so long—you’re a good man!

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Chapter 1

Developments and forces in a number of areas outside of education are creating a situation within the education field that could change the educational process itself. First, there are technical forces represented by advances in telecommunications technology. Interpersonal communications are a critical component in the education process but rely on some form of communications medium to effectively span the distance between listener and communicator and between learner and facilitator. The invention of the alphabet led to advances in writing followed by a shift from scrolls to tablets and finally to books. The invention of the printing press offered mass-produced books and the first real opportunity for students to learn at a distance from the instructor. Yet standard educational practice still required the instructor to be physically present in a classroom setting. With the availability of audio or videotape materials, students had access to course content delivered in a setting that did not require the physical presence of an instructor. Today there are totally new methods of obtaining and transmitting information via satellite and, most recently, via computer and the Internet.

Second, there are social forces in operation that are increasingly affected by technological advances. The personal computer continues to affect the way people obtain information and interact in daily social life. Many in education have experienced the meeting or presentation interrupted by someone’s cell phone or the classroom activity disturbed by a student sending or receiving e-mail, or making or receiving a cell phone call. The exposure to beepers, cellular telephones, computers, laptops, and the continuing electronic revolution in other forms of communications media has also produced non-traditional education options such as online instruction.
Third, there are professional forces creating new education forums. Teachers in the 21st century classroom are expected to meet higher standards, master the intricacies of computer-supported curricula, and effectively use Internet-based research or communications resources for their professional and curriculum development. As information technology advances, it changes the delivery of education itself. Education has always been linked to the process of communication, but it has never been restricted simply to the transmission of information. The education of an individual implies that an exchange and discussion of ideas has taken place, contributing, through dialogue, to personal growth and intellectual development of the person. The process of education itself is affected as a result of this exchange and growth. Educated individuals use their knowledge to create tools that contribute to further advances in the educational process.

Background

The acceptance of distance education alternatives by students and teachers might be linked to future developments in telecommunications, hardware and software. Many of the traditional objections, problems, or barriers to telecommunications developments can be classified as technical or non-technical.

Technical problems focus on issues such as the perceived reliability of hardware components or software available to instructors. Hardware and software that are not user-friendly can create problems affecting the successful delivery of course materials. The information technology industry is constantly attempting to address this area, and these barriers may fall as the technology improves.

Non-technical problems center on professional objections to online courses. Job security, intellectual property rights, course control, and the constant requirement to learn or maintain new
skills are listed as concerns by faculty in previous studies (Nania, 1999). Web-based courses require a training period that faculty must fit into their existing schedule. In a study of pre-service teacher educators, it was found that faculty members were expected to master a complex array of technical skills and subject matter expertise resting on the availability of structured support systems (Schmidt, 1995). The existence of a structured tutorial system with effective technical support appears to eliminate many of the reasons cited by faculty members for failure to offer online courses (Nasseh, 1999). A wider use of Web-based courses might be expected in an environment where such a structure exists.

Statement of the Problem

Acceptance by schools, colleges or departments of education (hereafter referred to as SCDE) has not increased despite the fact some universities have developed structured technical support and training systems to assist faculty members in the development and presentation of online courses. The State University of New York (SUNY) offers an extensive array of services designed to facilitate distance education efforts through the SUNY Learning Network (SLN). Twenty-six percent of the courses offered via SLN during the 1999-2000 academic year were education courses; during the academic year 2000-2001, the percentage of education courses available via SLN fell to 25% but was anticipated to rise to 30% during the 2001-2002 year. However, these figures do not reflect the fact that, of 16 SCDEs in the SUNY system, only five schools of education (SOE) in the 2000-2001 academic year offered courses via SLN (SUNY Learning Network, 2002). The level of use of distance education methods to deliver education courses at the state level is consistent with a national pattern. As reported by Carnevale (2000a) in the Chronicle of Higher Education, at least 1,680 postsecondary education institutions in the United States offered distance education programs during the period 1997 to 1998. Acceptance
by SOEs within this group offering such programs was limited. Only 19% of those courses offered by SOE at the undergraduate level were offered via distance education methods, while 40% of education courses (in schools of education) were offered at the graduate level via distance education. SCDE’s at the national level have only offered 1,470 courses at the undergraduate level and 3,520 at the graduate level (U.S. Department of Education, National Center for Education Statistics [NCES], 1999). Few studies exist that address this question: Do faculty members engaged in the professional development and preparation of teachers recognize a role for online courses in that process?

Purpose of the Study

The purpose of this study was to identify factors that influence the adoption of online courses by State University of New York faculty members engaged in professional development and preparation of teachers. The technical, social, and professional forces outlined above may allow for entirely new educational settings requiring substantially different teaching methods.

Research Study Questions

The level of use of Web-based instruction in SUNY schools of education, departments of education, and teacher education programs may be affected by factors noted in previous studies such as: poor technology, lack of training, professional issues, and student demographics (Jacobsen, 1997; Nania, 1999). The National Education Association (2000, June), in a survey of higher education faculty, noted a correlation between the use of Web-based courses and faculty members’ demographic factors. However, it is also conceivable that the level of Web-based instruction taking place may be affected by factors not mentioned in previous studies.
The central question of this research study was: What factors and concerns affect State University of New York teacher education faculty members’ decisions regarding development and implementation of online courses?

The principal research question was subdivided into seven subordinate questions:

1. What factors influence SUNY faculty members’ decisions to develop and implement online courses?
2. What are SUNY faculty members’ primary concerns regarding the teaching of education courses online?
3. To what extent are SUNY faculty’s concerns about online courses related to their:
   a. years of teaching,
   b. content area affiliation,
   c. current position,
   d. academic degree, and
   e. tenure status?
4. How do the findings of this study compare to those of previous studies regarding the institutional, technical, and faculty-centered issues that affect the development and implementation of online courses?
5. In what ways do SUNY faculty who have taught online and those who have not differ in demographics, concerns, and agreement concerning related issues?
6. What are the primary reasons some SUNY faculty decide not to teach online?
7. How important do SUNY faculty believe Web-based teaching is in teacher education?
Assumptions and Delimitations

This study was bounded or delimited by a number of assumptions or parameters.

1. This study focused on the *online use* of computer equipment when used to complete required pre-service education course work as opposed to the use of computers to teach skills to prospective teachers or to develop an understanding of how computers might be used in a classroom situation.

2. The study was also confined to the State University of New York (SUNY) system, specifically to 16 identified campuses having teacher education programs. The SUNY system is among the largest public providers of teacher education courses in the United States; however, no attempt was made to generalize attitudes and concerns outside the SUNY system or to non-public SCDEs.

3. The study was limited to information gathered from self-reported Likert scale and open-ended items.

Significance of the Study

Despite limitations, barriers, and software problems, online courses are widely available in business, industry training, and professional development. The acceptance of telecommunications technology by the education community and schools of education is less clear. On one hand, the education community appears to recognize the significant role of technology in the classroom and computer-based online courses. Teachers are required to master and apply technology resources in their teaching (International Society for Technology in Education [ISTE], n.d.). But teacher training programs often fail to teach their students how to incorporate technology into their teaching (Basinger, 2000). Teachers are expected to use
technology but are themselves not fully exposed to all the ramifications of computer-based learning, including online instruction. This, again, might be evident by the scarcity of online courses offered by schools of education, colleges of education, and departments of education.

Definition of Terms

Terms defined herein are used throughout the text with the specific meaning given here.

Asynchronous learning is communication in which interaction between parties does not take place simultaneously (Willis, 1995b).

Computer assisted instruction (CAI) is the teaching process in which a computer is utilized to enhance the learning environment by assisting students in gaining mastery of a specific skill (Willis, 1995a).

Distance education is the process of providing instruction when students and instructors are separated by physical distance. Technology, often in tandem with face-to-face communication, is used to bridge the gap (Willis, 1995b).

Distance learning is used in some cases synonymously with distance education, but also can be viewed as the desired outcome of distance education (Willis, 1995b).

Hybrid courses are courses in which the delivery method is divided between online time and classroom time.

Multimedia instructional designer (MID) is a person who “helps the faculty develop technically and instructionally robust teaching and learning environments that are appropriate to the instructor's style of instruction, content area, level of the students, and technology training” (Fredericksen, Pickett, Swan, Pelz, & Shea, 1999a).

Synchronous Learning is communication in which interaction between participants occurs simultaneously (Willis, 1995b).
Technology is an evolving term referring to a systematic technique, method or approach to solve a problem. Much of today's technology implies the use of computers (TechWeb Technology Encyclopedia, n.d.).

Web-based implies the use or implementation of Internet resources along with any basic communication programs such as e-mail, bulletin boards, etc.

World Wide Web is “an Internet service that links documents locally and remotely” (TechWeb Technology Encyclopedia, n.d.).

Chapter Summary

Distance learning has, since its inception, been dependent on three variables: the instructor, the student, and the communications medium available. It requires both the student and the instructor to accept the technical implications associated with teaching or learning at a distance. As with any new technology, distance education tools require the participants to invest time and effort developing additional skills. The importance of these skills in the education process is reflected in the professional interest that surrounds any discussion over use of computers in the classroom setting. A review of past and current studies suggests less enthusiasm when using computers to deliver distance education courses during the pre-service preparation of teachers.
Chapter 2

Review of Literature

A preliminary search of available resources dealing with distance education was conducted along with a basic analysis of the content to determine the usefulness of the material. The Educational Resources Information Center (ERIC) database contained references to studies and articles that focused on distance education or online instruction, but few studies specifically addressed online courses within teacher preparation programs. This chapter describes the background of distance education, faculty and student considerations when developing and implementing courses delivered at a distance, and common concerns, both institutional and technical. Samples of structured online programs are described.

Background

Teachers today have access to a wide range of technical devices and tools with classroom applications. The development of the computer and more recent hand-held communication devices had raised several issues and concerns for the future of education and learning. Viewed as a teaching tool, the computer was widely accepted in the business community as a professional development resource, and college administrators have been described as viewing new distance learning tools as valuable marketing resources. Web-based courses have received mixed levels of acceptance in the academic world, but in private sector systems these courses have received a magnificent reception. In the business community, only 51% of the training market in 2003 will exist in the standard classroom format; courses delivered via technical means will surface as the favored delivery platform for the business training market (Mottl, 2000).
The use of computers in the classroom moved away from the static bulletin board and classroom homepage scenario to the present challenge for teachers to "participate in online professional collaboration with peers and experts" (ISTE, n.d., Item 18). Advances in computer technology combined with developments in Internet-based communications infrastructures also contributed to the notion that “the Internet, with its potential to expand the reach of higher education dramatically, presents very promising prospects to increase access to higher education and to enrich academic activity. The Internet frees students to pursue education at times that are convenient to them and from any location in the world” (U.S. Department of Education, Office of Postsecondary Education, Policy, Planning, and Innovation, 2001, p. 29).

Distance education courses were predicted to grow at a rate of 21% between 1998 and 2005 based on a wide range of factors, including widespread acceptance by K-12 education (Shah, 1999). According to the National Center for Educational Statistics (NCES), 29% of the two- and four-year colleges and 40% of the graduate programs offered education courses via distance learning. The difference between undergraduate and graduate education courses offered via distance methods rests on the emphasis in education on graduate school (U.S. Department of Education, NCES, 1999). Distance education lends itself to graduate level education.

The United States Distance Learning Association (USDLA) reported that less than five percent of all faculty members in higher learning institutions in the United States can be classified as an online "innovator" (United States Distance Learning Association, [USDLA], 2000). A year earlier, the U.S. Department of Education reported that only 39% of public universities and 28% of public four-year colleges had instituted policies on Web-based intellectual property rights (as cited in USDLA, 2000). Furthermore, in 1998 the USDLA reported that 1,680 institutions offered 54,000 online education courses to 1.6 million students,
reflecting a 72% increase in this activity since 1995 (Carnevale, 2000a). The U.S. Department of Education also reported that 44% of higher education institutions in the United States offered distance education programs in 1998. During the same time period (1995-1998), the distance learning debate over accreditation, quality standards, and intellectual property rights intensified (McMurtrie & Mangan, 1999).

“The number of students enrolled in online learning nationwide is growing 33 percent a year and it is expected to hit 2.2 million by 2004, according to International Data Corp. A study by Bear, Stearns & Co., Inc. meanwhile, found that 150 institutions offer undergraduate degrees online and that nearly 200 offer online graduate degrees” (Thomas, 2002, ¶ 5).

Enrollments, course offerings, and the availability of distance education rapidly increased during the 1990s. Eight percent of undergraduates enrolled in such classes at postsecondary institutions in 1999-2000. A higher percentage of students at public 2-year colleges than at 4-year institutions participated in distance education classes (9 versus 4 percent). The Internet was the most used distance education method (60%) (U.S. Department of Education, NCES, 2002).

If the acceptance of distance education courses continues, teachers may find themselves immersed in technology-enhanced classroom settings without a corresponding growth in the availability or use of online courses during their pre-service training years. The World Wide Web has become the vehicle of choice in the development and presentation of online courses, but its use still generates issues affecting distance education. Teacher preparation programs are frequently criticized for their failure to have "written, funded, regularly updated technology plans" (U.S. Department of Education, NCES, p. 4).

Bednar and Charles (1999) reported that a major change in distance education has occurred and suggested that distance education (at one time) was clearly differentiated from
traditional education, but today this is no longer the case. They repeated the caveat that distance education requires a supportive infrastructure, faculty development, and preparation, as well as the development of student skills. In 1999, Shah wrote that other factors, in the future, would affect distance education. Shah predicted the acceptance of technology by the general population, the growth of adult education and job-mandated credentials, and the growth of Web-based interactive distance learning all will be affected by the popularity of the life-long learning and training concept (Shah, 1999).

Edwards and Fritz (1997), after evaluating three educational online delivery approaches, argued that online education demands more of students and faculty. It requires not only effective and reliable technology, but also a clear sense of what teaching and learning are all about. Successful online education requires a student with maturity and the ability to communicate effectively through an electronic medium. This raises the issue of educational elitism based on a selection process. Penn State, to cite one example, required a pre-test on aptitude and Internet skills as part of a Web-based freshman course (Thomson & Stringer, 1998). On the same topic, Nasseh (1999), in discussing college professors, reported that "about 65% of the teachers indicated that the level of competency of students should be evaluated before their participation in virtual courses" (p. 2). It is important to note that a selection process for online education appears to be inconsistent with the notion that online education's appeal rests on a wider access to educational opportunities.

Previous studies on distance learning centered on the quality of the educational material offered to students, with others focusing on faculty reaction to the tools available for distance education and the impact of those tools on the teaching profession. The use of Web-based courses raised concerns that the teaching profession itself would be devalued and students
dehumanized (Novek, 1999). The key concerns, according to the American Council on Education (ACE), centered on intellectual property policy, faculty rights and responsibilities, student access and privacy, potential liability associated with distance learning courses, and accreditation and approvals beyond state and national borders (American Council on Education, 2000). It should be noted that many of these issues are still at the core of the distance learning debate. These concerns can be viewed from an institutional/technical or participant-centered (both faculty and student) focus. Both perspectives contribute to the ongoing debate over distance learning in education.

Several studies provided an excellent review of the concerns raised by distance education teachers but did not address issues dealing with current technology resources. According to Matthew, Parker and Wilkinson (1998), these studies did not address the corresponding developments in the technology offered by the newer generation of computers or the World Wide Web. The literature continued to address the issue of faculty dissatisfaction with distance education as it was linked to older distance teaching methods such as telecourses. Dillon and Walsh (1992), in a review of distance education research, identified twenty-four studies which linked faculty satisfaction with distance learning to professional issues such as self-esteem and prestige. At least one study (Clark, 1993) reported continued dissatisfaction by faculty members when using visual media, specifically telecourses and computer conferencing. Clark’s study of 502 faculty members reinforced the importance of the medium (visual) to the overall quality of the courses themselves.
Faculty and Student Considerations

Faculty members, in general, expressed several levels of concern about distance education. Administrative issues centered on the level of training available to faculty on the technology required to conduct a Web-based course and the amount of additional preparation required to prepare and deliver a distance education course. Compensation for additional instructor preparation time and other salary issues, as well as the issue of job security, were of concern to faculty members. Faculty members raised issues of educational philosophy. They viewed education in terms of learning and argued that communication of fact alone does not result in learning. Further, they argued that education has psychosocial aspects associated with the process, and interaction between students and professor was essential in the learning process.

Existing literature was reviewed to determine what measures have been taken to address elements identified as barriers to the implementation of distance education within academic settings. The issues required behavioral adjustments by faculty members and students in combination with structural and technical modifications to existing infrastructures. Studies involving distance education faculty and participating students revealed faculty-student-technician issues, including concerns for academic quality and the impact of technology on teaching methodologies, as well as issues concerning the structure and support systems required by distance education programs (Burnham, 1988; Willis, 1995a; Nania, 1999).

Research findings dealing with Web-based instruction were contradictory and confusing. In 1997, Edwards and Fritz concluded that Web-based instruction using available technology produces desirable pedagogical outcomes. Their findings were supported by Perrin's (1999) conclusion that the level of interaction provided by online instruction does allow for learning to
take place. Subsequent studies also concluded that “…we do not find any significant variation in learning effectiveness between classroom and online courses taught in the interactive mode” (Mayadas, 2001, p. 136). Other researchers disagreed. Crow (1999), Guernsey (1998), Hassenplug and Harnish (1998), Nasseh (1999), and Novek (1999), after studies of a number of classes delivered via distance means, reported that Web-based instruction failed to produce desirable pedagogical outcomes or to achieve a level of student interaction adequate to facilitate learning.

Instructional issues were also cited by Gutierrez (2000) and Perrin (1999) as major barriers to full use of Web-based capability in higher education. Instructional issues such as faculty control over the curriculum have to be addressed if Web-based instruction is going to reach its potential at the post-secondary level.

The appropriate methodology for evaluating the effectiveness of online Web-based courses is still unclear. McMurtrie and Mangan (1999) questioned if teaching or learning standards developed for education in classroom settings could even be applied without modification to a distance education environment. Another issue raised by Gutierrez (2000) was a change in teaching venue from traditional to computer-based online instruction. This shift "transforms the instructor’s role from the source and dispenser of knowledge in the classroom to that of the facilitator or monitor of a learning process that encompasses multiple elements and interactions" (Gutierrez 2000, p. 1).

Inman, Kerwin, and Mayes (1999) conducted a survey of faculty and students at the community college level and discovered that instructors rated the quality of distance learning equal to or lower than campus-based courses. The level of course quality was a critical element in the decision to offer online distance courses. It is important to note, however, that it was
difficult to determine the level of course quality in higher education given the current accreditation system for colleges and the traditional faculty control over the design, teaching, and content of courses. Crow (1999) argued that online education was monitored by the same governing boards and oversight organizations as traditional classroom-based education programs. Faculty members argued "quality is best assured when ownership of developed materials remain in the hands of faculty members" and, on any teaching issue, faculty members should have the first and last say (University of Illinois, 1999). The concern focused less on compensation for any intellectual property that might be developed and more on the control over that property. Faculty expressed concern that to “cut and paste their course into other formats and ultimately misrepresent the points they wanted to communicate” (National Education Association, 2001b, p. 4).

The role of the instructor in Web-based instruction is an issue of paramount importance. Does teaching online or at a distance require the instructor to utilize specialized teaching methods, or does it allow for the continuation of traditional methods (Thomson & Stringer, 1998). Recognizing the changing role of the instructor, it became clear that Web-based teaching, with its emphasis on technology, would require changes in pedagogy as a result of the technology itself (Gutierrez, 2000; Nasseh, 1999). Distance teaching is not just about using technology; it is about perfecting a pedagogical art for effective learning through institutional collaboration and innovation (Bartley, 2001).

Research also revealed repeated concerns for the quality of teaching and learning that takes place on-line. As written by Feenberg (1999), most faculty members "cannot imagine simply reproducing the learning experience of a face-to-face classroom online" (p. 5). Faculty members observed an apparent lack of student interaction since the online learning environment
essentially required exclusive written interactions. Foell and Fritz (1999) noted that "technology concepts are more focused on cognitive tasks and less on interpersonal skills" (p. 2). Based on such reports, when faculty members questioned the legitimacy of pedagogical methods, based on a Web-centered delivery system, their concerns appeared to be justified.

The Institute for Higher Education Policy (IHEP) reported that online courses may be more effective if certain subjects are offered with undergraduate distance courses generally focusing on traditional liberal arts, business, and computer science. Further, online education courses and programs were more likely to be found at the graduate level (Institute for Higher Education Policy [IHEP], 1999).

Faculty members also noted that even when a course was offered at a distance, the mode of delivery could vary and professor-student and student-student interaction needed to be taken into consideration. Furthermore, since the success of Internet instruction depended on the amount of student engagement with the course materials, it was essential that special attention be given to delivery mode and interaction (University of Illinois Seminar, 1999). Effective Internet instruction depends on solid pedagogical principles and practices and not on new technology (Gutierrez, 2000).

Cocheneur and Reynolds (1998) pointed out that the factors essential for success in a conventional face-to-face course were similar to those needed in a distance course. Planning, instructional design, and management, support for teacher-student and student-student interaction, reliable technical support, empathy for student needs, and instructor training are all required in the successful presentation of high quality course content. Other studies suggested that classroom and distance education offer different learning experiences to students. According to Gomery (2001), in terms of asynchronous learning networks (ALN), in any
…attempt to reproduce the basic elements of classroom training, it is certainly not the
same as classroom training. It has both weaknesses and strengths compared to classroom
teaching. An ALN lacks, for example, the instantaneous interaction with the
professor…where a question can be asked and answered in real time. But it also means
that people who are shy about asking questions in class can not be crowded out by those
who are more vocal. They can send their questions …through the calmer medium of
electronic mail (p. 141).

Nania (1999) theorized that cognitive learning was best achieved online, while affective learning
could best be accomplished in small groups. The key elements for Nania were the level of
teacher-student and student-student interaction and the selection of appropriate content.

Based on individual surveys with faculty and students alike, several studies (McDowell & Schuelke, 1998; Liu, Reed & Phillips, 1992; Gabriner & Mery, 1998) indicated that teachers
and students experience anxiety and apprehension when using technical or computer systems.
Findings regarding apprehension were linked to the students' ability to comprehend the subject
matter delivered by electronic communication (Monson, Wolcott, & Seiter, 1999). One of the
solutions proposed to deal with anxiety and apprehension was training specifically in the use of
technical tools (Cochenour & Reynolds, 1998).

Viewed from the perspective of the student, the distance learning process itself can
generate barriers to learning. Monson et al. (1999) reported that some students experienced
communication apprehension, which can decrease cognitive performance levels. Computer-
related anxiety was associated with writing apprehension, since written skills are required to
navigate the cyber-classroom. McDowell and Schuelke (1998) reported that studies indicated
that "students are very experienced in word processing, online computer services, e-mailing
people on the computer but have limited experience participating in computerized electronic discussion groups" (p. 12).

The concern for quality instruction rests on the belief that education was not simply the transmission of information but also the development of critical skills and personal transformation (University of Illinois, 1999). An individual is changed by the education process and by the social interaction between faculty and student and between students. A National Education Association (NEA) survey report indicated that "a significant portion of distance learning faculty never see their students in a face-to-face setting: only 30% of Web-based faculty and 19% of faculty whose distance learning course is not Web-based see their students once a week or more" (National Education Association, 2000b, p. 6). Guernsey (1998) discovered that many times students online do not participate and are not engaged in an interaction, and those who are involved in student-to-student interaction sometimes do little but exchange uninformed opinions. The solution, Guernsey suggested, is active instruction with specific and direct questions to students. “Distance education classes need explicit procedures and mechanisms for feedback from instructors to students…” and “…explicit procedures and mechanisms for communication among students” (Beasley, 2002, p. 34). Students themselves value interaction and express "support for the importance of seeing, hearing, and having contact with professors" (Ryan, Carlton & Ali, 1999, p. 5). A report by faculty at the University of Illinois indicated that without any doubt "frequent student-faculty contact in and out of the class is the most important factor in student motivation" (University of Illinois, 1999, p. 25). On the other hand, the report also acknowledged that computer networking can also encourage high quality interaction. The level and quality of interpersonal contact was related to the level of faculty job satisfaction and accounts for one of the factors cited by Taylor and White as important to faculty. Non-technical
factors associated with teaching and valued by the faculty include working with motivated 
students, teacher satisfaction, feeling of personal achievement, and achieving high level of 
recommended increasing faculty support and training as a step toward resolving these issues. 

The quality of distance education courses was key to the acceptance of distance 
education by higher education faculty (American Federation of Teachers [AFT], 2000). AFT 
also resolved that an undergraduate degree earned entirely from a distance was not of the same 
quality as a degree earned in a classroom. This national teacher organization called for an 
education process that valued interaction (among students, among students and professors); 
offered support and decent compensation for teachers, and stimulated additional research on the 
effectiveness of distance education (Carnevale, 2000b). AFT resolutions reflected faculty 
concern over the quality of education offered online.

Institutional and Technical Concerns

According to Liu and Thompson (1999), studies suggested that distance education 
courses, in general, required more time to prepare than the traditional classroom-based courses. 
Distance education stressed instructor presentation skills with little student participation and 
required that higher education institutions dedicate time to train instructors on computer 
technologies, distance education class management skills, and even attention management. The 
same year (1999), the Institute for Higher Education Policy predicted that colleges and 
universities would be challenged to assist faculty members in the integration of technology, 
required to provide faculty members with adequate user support, and forced to plan for the 
financial resources to maintain adequate information technology. Meeting these challenges 
required a review of policies regarding online courses and current accreditation guidelines. An
area of concern was the requirement for “pedagogical and technical support for faculty, staff, and students with many institutions experiencing technology ‘support services crises’ in which the current supply of resource needed for faculty, staff, and students does not meet the rising demands and expectations” (Amey & VanDerLinden, 2003, p. 89).

In general, recent studies have identified clear and recurring issues surrounding distance education programs. They include lack of adequate funding and policy constraints, limited staffing, resistant attitudes among some educators, lack of technical knowledge, inadequate infrastructure, and outdated equipment (Nania, 1999).

Faculty members in higher education viewed distance education as ineffective, since it depended on technical support and the ability of higher education institutions to provide the necessary backup when the system fails. Online instruction contained its own risk, which related to the equipment needed to conduct the course itself. Nania (1999) specifically identified the unique obstacles encountered by faculty and students using the Web as part of their online contact. These obstacles included cost of hardware, software, and Internet service providers, hardware and software problems, out of date Web-sites and links, connectivity problems, need for staff development, and lack of administrative support. A later study (Curbelo-Ruiz, 2002) revealed similar barriers to distance education, including a lack of professional development leave to learn Web-based technologies, lack of incentives to teach online, workload concerns, and concerns over the quality of distance courses.

These factors identified by Nania (1999) could, according to the Institute for Higher Education Policy (IHEP), raise the level of faculty and student frustration with online courses and might explain the reported higher than average dropout rate for distance learning students in comparison to traditional classroom students (IHEP, 1999). The IHEP study also raised serious
questions about computer-based distance learning. The study questioned the quality of access to computer-based distance learning, the students' knowledge of the necessary skills to use the technology, and the adequacy of the technical support.

A technical guide for distance educators published by the College of Engineering at the University of Idaho stated that the "instructional format itself (e.g. interactive video vs. live instructors) has little effect on student achievement as long as the delivery technology is appropriate to the content being offered and all participants have access to the same technology" (Willis, 1999a, p.1). Successful distance education instruction, according to the Outreach Guide, requires extensive preplanning and formative evaluation, use of a well-designed syllabus and tools such as interactive study guides, and proper training for teachers on equipment and technologies.

Falba's (1998) study of faculty members' use of technology in teaching indicated that 93% of those surveyed believe that technology in teacher education is somewhat important or very important and that there is limited use of technology in teaching. It is worth noting that an earlier study (cited in Falba, 1998) revealed that there were "insufficient numbers of faculty involved in distance education during the Spring 1997 semester" (p. 44) to warrant a survey question on the use of technology for distance education. This should not be surprising, according to Falba, since "62% of the respondents indicated no knowledge or very little knowledge of distance education technology" (p. 47). It would appear that faculty members do not use technology because they are unfamiliar with it. However, Falba's study introduced another element to the situation. Over half (54%) of the faculty surveyed used the Internet at home but felt restricted when using it in teaching. Respondents also felt that it takes additional "time to learn new programs" (p. 56).
Time limitations were raised in other studies of faculty members’ use of distance learning technology and offered as a valid reason for not using available technology in teaching (Schifter, 1999; Matthew, Parker, & Wilkinson, 1998). These studies concluded that the basic reasons for faculty avoiding technology in their instruction were lack of technical support, knowledge of distance learning, and time to learn new technology, and concern over faculty overload and quality of instruction. These same studies among others addressed the influence of certain variables such as tenure status, academic rank, and years of teaching experience. It was found that faculty members secure in their position by tenure and academic rank were more likely to experiment with new delivery platforms within education.

Viewed from the perspective of a faculty member, online courses require a supportive system that teaches the teacher the appropriate techniques for instruction online (USDLA, 2000). Faculty members teaching pre-service teacher education courses reported that there was no time available to learn computer-related technology, that there was no access to equipment and software, and that there was no training available to learn how to use new technologies (Schmidt, 1995). Online education is dependent on several components, including the technical hardware and software, the student, the faculty/instructor, and the technical support staff. The interaction of these components influenced the quality of education delivered to the student. However, the cost and maintenance of computer hardware, Internet connection problems, lack of technical support, and lack of time required to learn new skills were factors that needed to be taken into consideration (Liu & Thomson, 1999; Nania, 1999; Nasseh, 1999). Faculty-centered issues cited in other studies included concerns for academic integrity, alienation of students and faculty, and lack of research into computer-based distance education (Feenberg, 1999; Novek, 1999; Nasseh, 1999).
The perceptions and motivations of faculty participating in distance education programs examined in 1988 by Burnham were reconfirmed in recent studies. According to Burnham, faculty members felt that more time was needed for the preparation of distance courses and that distance education was dependent on a technical system that often failed, lacked the physical contact with students, and provided little interaction and discussion among students. In his 1988 study, Burnham asked a key question that provided a framework for the present debate in distance education: “How much, if any, effect does the medium have on classroom discussion?” (p. 6).

A 1999 National Education Association survey of its members offered an excellent summary of the faculty concerns for the future of distance learning (NEA, 2000). The report indicated that 53% of distance learning faculty members spent more hours per week in preparing and delivering distance learning courses than preparing and delivering traditional courses. More significant, perhaps, was the finding that 48% of the faculty who had taught distance learning courses (eight times or more) indicated that more preparation was required when teaching distance learning courses. Only 21% of the faculty members pointed out that they spent fewer hours on distance learning courses. The survey results also showed that “faculty evaluate distance learning primarily on quality of education considerations” (NEA, 2000, p. 9) and that faculty expressed concern that they did more work for the same amount of pay and that they were not fairly compensated for their intellectual property. Faculty members also felt that the quality of education declined with distance learning as well as the number of teaching jobs, which in turn would lead to a decline in the quality of faculty and less candidness in the classroom. Faculty members did not feel that Web-based courses were as effective in
strengthening group problem-solving skills, improving verbal skills, or helping students deliver better oral presentations (NEA, 2000).

Distance education requires support for both students and faculty. It requires expertise in the content area, in the use of telecommunications equipment, and in the use of specific computer applications. Teacher and student proficiency in computer applications is essential if online education is to be successful. Faculty also must be prepared to meet special requirements of teaching at a distance (Kriger, 2001), and function within a model of curriculum development and teaching that 'unbundles' the role of the faculty member and includes other specialists (curriculum developers, content deliverers, assessment specialists) (Kriger, 2001).

Despite studies suggesting a rise in the level of computer expertise within faculty ranks, barriers regarding the effectiveness of distance learning remained. Equipment had to be set up, connected, and maintained. Online access required network access and technical support or assistance that was often lacking (Gabriner & Mery, 1998). Concern for the effectiveness of distance education courses was, in the past, triggered by restrictions born of deficiencies in the available communications media. Technical issues were not new. Audio and video media could not re-create the classroom atmosphere nor offer the opportunity to learn in a social setting. Television remained limited in the role it played in an inter-active educational process. Media in audio-video forms could effectively support but not replace the traditional classroom instructional methods. Technology remained flawed, since “computers and technology peripherals are still not well-designed, fault free and easy to use” (Jacobsen, 1997, p. 1).

In response to this criticism, the future state of computer technology and its usefulness to distance education must be taken into consideration. It is conceivable that future technological developments will allow for real-time communications over the World Wide Web and take the
form of visual, oral, and written interaction by students and professors within a virtual classroom; students and professors sharing a space in time but not in a physical classroom. The critical element behind the acceptance of Internet-mediated distance education in particular is not technical resources, but staff development (NEA, 2001b, p. 2). Post secondary institutions are not ignoring distance education, but they may be giving it a lower priority than for-profit education companies (NEA, 2001b, p. 4).

It is imperative that college and university faculty members keep abreast of this new teaching medium as it evolves. Every college and university should have a plan and the resources to help faculty members develop the skills and knowledge that will allow them to keep pace with the expectations of their students. Without such faculty skills, it will be difficult for traditional colleges to participate in an expanding education market that may be dominated by hybrid education businesses (NEA, 2001b).

A Sample of Structured Online Programs

Reviewing the studies cited earlier leads to the conclusion that mastery of the technical processes and equipment associated with online distance education efforts is an essential requirement for all participants. The responses and comments in these studies suggested that a structured support system must be in place, and that such a system must include a training program for faculty with technical intervention promptly available when the system fails. There are several organized efforts at higher education institutions that seek to provide this type of structure to faculty members and students.

Linking Pre-service Teachers with Faculty. Zimmerman and Greene (1998) described a program designed to link pre-service teachers with university faculty via video, audio, and data transmission over telephone lines. This Virginia-based program was successful to a degree
because the attitude of the pre-service teachers toward technology was positive and participants understood the value of the assistance offered over a distance. However, the pre-service teachers lacked confidence in using the available technology requiring the development of a serious training program in telecommunications processes. The program was not intended to be a distance education effort, but rather the solution to a communications problem between student teachers at remote sites and university-based faculty. The program faced barriers similar to those experienced in distance education programs: limited funds, equipment issues, and time.

**Faculty Support at Virginia Tech.** Another supportive program was initiated by Virginia Tech to “provide faculty with computers to aid their instructional endeavors” (Danielson & Burton, 1999, p. 4). The program was initiated in response to the frustration users experienced after frequent systems’ crashes, network connectivity failures, and even simple printing problems. Virginia Tech developed a supportive program to assist faculty who were not using the technology provided to them. It was found that, in some cases, the equipment or software did not work, or simply that the faculty members did not know how to use it. Faculty members suggested that they be financially compensated for the extra time spent in developing technology-assisted courses (Danielson & Burton, 1999, p. 9).

**SUNY Learning Network, New York.** The State University of New York (SUNY) has embraced the use of the World Wide Web as an educational tool and implemented an entire support network designed to offer training and technical guidance to faculty offering online courses. It supports this effort through a dedicated structure known as the SUNY Learning Network (SLN). This Network markets specific course offerings, coordinates the computer net over which courses are delivered, and assists instructors in developing expertise in Web instruction.
During the 1995-96 academic year, eight courses were offered as part of this pilot program with an enrollment of 119 students. By fall 2000, SLN had grown to encompass 43 campuses, over 1,000 courses, and an enrollment exceeding 10,000 students (See Charts A1 and A2 in Appendix A). Enrollment in fall 2001 was 14,303, with 19,214 enrolled by the fall of 2002. There were 1,399 faculty members offering 2,067 courses in fall 2002 (SUNY Learning Network, 2003).

The SLN was successful, in part, due to the inherent reliability of six independent servers. The flow of information between faculty and students was protected from interruptions in service. In effect, the system created a “trouble-free” environment for participants. (See Chart A3 in Appendix A).

SLN allows the course developer total “ownership” of the course and made no attempt to dictate content, management or delivery. Faculty are assigned a Multimedia Instructional Design (MID) partner, whose primary function is to assist faculty in the design process based on the faculty member’s conceptualization of the course goals and objectives. MID partners are a development resource, while the faculty members are considered the course experts. The instructional training process is on-going for all faculty.

The supportive structure offered by SUNY is extensive and provides an array of services. The SLN provides faculty with a four-stage faculty development process and a seven-step course design process. Participants are also offered access to a Multimedia Instructional Designer (MID) who provides technical guidance on how to put a course online. The level of satisfaction with SLN by participating faculty was studied by Frederickson, Pickett, Swan, Pelz, and Shea (1999a). A survey of 105 SLN instructors during the spring of 1999 revealed that “approximately 45% of the respondents felt their online students performed better than their
classroom students did. About 44% felt there was no difference in the student performance” (Frederickson et al. 1999a, p. 19). Faculty completing the SLN preparation phases reported higher levels of interaction with students, and all participating faculty reported being satisfied or somewhat satisfied with their online teaching experience (Frederickson et al. 1999a, p. 23).

A similar student survey conducted by the SLN found that approximately 84% of the students felt they had “a great deal of” or “sufficient” level of interaction with the faculty. Almost 80% of the students rated their online participation, as compared to the classroom, to be “much higher,” “higher,” or “the same” (Frederickson, Pickett, Pelz, Swan, and Shea, 1999b, p. 20).

The SLN seeks to resolve the lack of technical support in distance learning instruction by offering an extensive technical assistance program for faculty and students. A study of students’ satisfaction with the technical assistance program received ratings of “very satisfied” or “satisfied” by 65% of the students taking online courses through the SLN. These results suggested that the existence of a reliable and dependable support system (which should include a formal training process in the use of existing hardware and software) could resolve many of the barriers to distance education cited by earlier participants (Frederickson et al. 1999b).

Delivery of online courses has been an ongoing process by SLN, and SLN has consistently attempted to address the concerns and problems voiced by faculty members and students. Despite the increasing number of courses offered through SLN, increasing student enrollments, and greater numbers of participating faculty members, teacher education faculty do not, at first glance, appear to be adopting this form of distance education as readily. A review of SLN statistics suggests fewer online courses are offered by schools of education programs than non-educational programs within the SUNY system. It is unclear why teacher preparation
programs in New York are not using the education medium many of their students will be using in the future.

Chapter Summary

Distance learning and distance education evolved from the original "correspondence school" structure. Advances in the telecommunications industry offered real-time, interactive access to online computer-based education. “The success of computerized distance education is related to the availability of computer and communication technologies, instructional delivery, effective training and support programs, and the competency level of both teacher and student” (Nasseh, 1999, p. 2). Blending these components into a successful educational experience is still a challenge for higher education institutions. Drawing reluctant faculty and students into the cyber-classroom may be eased by providing training and incentives (Wolski & Jackson, 1999). Even these steps might not change the belief that online education will result in a devaluation of the teaching profession or result in a loss of jobs or, in the worst case scenario, change teaching itself (Novek, 1999). The involvement of teaching staff is critical. “It seems apparent that successful educational technology reform requires the consent of the faculty, as shown by the fact that past reforms of technology…have failed to radically change the way education has been delivered and transacted. In other words, even though technology may change the way students learn, it will have no impact without teacher support, and one of the most important reasons for the lack of faculty support is lack of faculty preparation. Teachers must be trained in using this new technology” (Gold, 2001, p. 36).

Despite the emotional and professional issues, teachers still believe that “higher education should move forward with distance education” (AFT, 2000). Professional educators simply ask that training and support be provided along with continued research. Research
suggests several key areas that must be kept in mind when evaluating Web-based distance courses.

Technical issues dealing with Web-based education are still unresolved and need to be addressed, including:

1. faculty and student training in the use of computer equipment and Web navigation,
2. institutional costs associated with the development of Web-based courses, and
3. technical support for faculty and students.

Non-technical concerns that need to be addressed include:

1. academic integrity
2. pedagogical differences, and
3. legal issues.

Computers continue to evolve into reliable and user-friendly education tools. The decision to integrate online courses into teacher preparation programs may start with other considerations. The NEA suggests that there are two central considerations that dictate how higher education faculty members and schoolteachers view teaching and learning: quality and access to education. Further, quality and access to education must be satisfied whether the forum is a traditional classroom or an online environment (NEA, 2000). More importantly, distance education and distance learning (specifically that offered via the Web) “lacks a field of empirical research to support theory and provide a framework. Research focuses on program description, student performance, cost effectiveness, teaching methodology, and social context of distance learning” (DuMont, 2002, p. 15). Distance learning “presents significant challenges to faculty” and “imposes more responsibility on the student” but it must also be remembered that the Internet and computer-based communication technologies are still young (Green, 2001, ¶ 8).
Chapter 3

Research Methodology

This study can be classified as quantitative research; it used objective measurement and analysis of numerical data to explore factors connected to professional decisions to use or not use developing technology to deliver pre-service education courses. This study can further be classified as a survey using a two-part questionnaire to collect data on tangible and intangible factors. Surveys of intangible constructs refer to studies of opinions or variables that are not directly observable or variables that must be inferred from responses made by respondents to questionnaires or interviews (Ary, Jacobs, & Razavieh, 1996). This instrument was composed of two parts: Part One requested demographic data and Part Two collected opinion data regarding the attitude of faculty members toward Web instruction. Faculty members were drawn from the State University of New York (SUNY) institutions with schools of education, colleges of education, and teacher education programs (SCDE).

Research questions were patterned after two 1998 studies. Hassan Ndahi (1998) at Oklahoma State University investigated the use of distance learning technology by faculty of industrial and technical teacher education programs. Christy J. Falba (1998) at the University of Nevada (Las Vegas) investigated the use of technology by College of Education faculty members.

Both Ndahi and Falba investigated distance learning using a range of delivery vehicles (audio and video as well as computer-based). The present study examined a single delivery method, specifically Web-delivered asynchronous courses. Selected items from Ndahi’s (1998) study were adapted for use in this instrument. In the development of the current instrument, a
focus group was held, and a review of the suggestions from the focus group members is included in this chapter.

Research Questions

The central question of this study was: What factors and concerns affect State University of New York teacher education faculty members’ decisions regarding development and implementation of online courses?

The principal research question was subdivided into seven subordinate questions:

1. What factors influence SUNY faculty members’ decisions to develop and implement online courses?
2. What are SUNY faculty members’ primary concerns regarding the teaching of education courses online?
3. To what extent are SUNY faculty’s concerns about online courses related to their:
   a. years of teaching,
   b. content area affiliation,
   c. current position,
   d. academic degree, and
   e. tenure status?
4. How do the findings of this study compare to those of previous studies regarding the institutional, technical, and faculty-centered issues that affect the development and implementation of online courses?
5. In what ways do SUNY faculty who have taught online and those who have not differ in demographics, concerns and agreement concerning related issues?
6. What are the primary reasons some SUNY faculty decide not to teach online?
7. How important do SUNY faculty believe Web-based teaching is in teacher education?

Population and Sample

Population

The study population consisted of faculty members engaged in preparing pre-service teachers at the 16 universities and colleges in the SUNY system that were identified as having a school of education, college of education, or department of education (SCDE).

The State University of New York (SUNY) system is a geographically widespread chain of 64 campuses throughout New York excluding New York City. The overall enrollment within the SUNY system is over 400,000 students. Staff at these locations include 14,000 full time faculty members (Mitchell, 1999, p. 698). The complete university system is comprised of four University Centers, thirteen Colleges, four Health Science Centers, five University Colleges of Technology, five Statutory (Partnership) Colleges (four housed at Cornell and one at Alfred University), six Colleges with Special Missions, and thirty Community Colleges. (See Appendix B for a complete listing).

Sixteen colleges of the 64 SUNY campuses were identified as having teacher education programs at either the undergraduate or graduate level (State University of New York [SUNY], 2000). Included in these campuses are one Partnership College (Cornell), four University Colleges (Albany, Binghamton, Buffalo, Stony Brook), and eleven SUNY Colleges (Brockport, Buffalo State, Cortland, Fredonia, Geneseo, New Paltz, Old Westbury, Oneonta, Oswego, Plattsburgh, and Potsdam).

In order to identify the population, a letter was sent to the appropriate administrator of each identified college and university offering teacher education programs requesting assistance in the identification of faculty members (both full-time and adjunct) currently teaching courses.
in teacher education. Nine of the fifteen colleges responded to this request and provided names of current faculty members and all adjunct faculty members. For the remaining colleges, a roster was developed through an in-depth search of the individual college's official Web-site. It is customary for higher education institutions to update their websites on an annual basis, with some performing updates more frequently. The information that was gathered from this source was felt by this researcher to be more reliable and current than a review of the college catalogs, which can typically be printed up to a year in advance and therefore not reflective of changes in faculty status. From these sources, a database of education faculty members (full-time and adjunct) was developed which identified the population (N=826).

Sample

The population focus of this research was the SUNY teacher education faculty involved in the preparation of pre-service educators. Much of the research that has been done previously concentrated on small sample sizes and attempted to generalize to a much larger population although "...the most important characteristic of a sample is its representativeness, not its size" (Ary, Jacobs, & Razavieh, 1996, p. 182). The larger the sample, the more findings can be generalized if they are well selected (Gay, 1992). In descriptive research, Gay recommended a minimum of 10% of the population as the acceptable sample size, provided the 10% is representative of the population. For a confidence level of .05, Daniel Wunsch (1986) suggested that, for a population of 800, the sample size should be 260. This researcher established a sample size of 275.

A simple random sample was drawn from the current list of teacher education faculty at 16 campuses of the SUNY system. Each faculty member was assigned a unique number from which a sample of 275 was drawn based on a table of random numbers. Simple random sampling
was utilized because it is a form of probability sampling technique. Since the selection of participants was random from this list, it included a range of professors, from those who have no experience in online Web-based distance education to those who have already participated in some form of Web-based learning. Survey demographic items identified those faculty members who have experienced teaching via the SUNY Learning Network (Lotus Notes) or other online delivery methods such as Blackboard®, TopClass®, privately authored programs, etc., and those who have not.

Instrument Design

A questionnaire was designed and modeled after a survey instrument developed by Ndahi (1998). Demographic information included years of teaching, content area affiliation, current position, academic degree, tenure, and current use of online learning technology. This original survey instrument was comprised of Likert-type questions, scaled items, checklists, and closed-ended and open-ended questions. The instrument was modified from the format used by Ndahi (1998) addressing issues related to the use of distance education by industrial and technical teacher education faculty, specifically the attitudinal statements for which the response range was from Strongly Agree to Strongly Disagree.

Focus Group

A seven-member focus group from SUNY Oswego was established for the review of questionnaire items. The purpose of the group was to verify that questionnaire items matched the objectives of the survey and to suggest the addition of items as appropriate. Members of the group were not part of the sample pool and were sought for their representation of distance course developers, deliverers, and students (receivers). Of these members, two had extensive experience with the development and delivery of distance education, including asynchronous
online course development, one member was an Associate Professor within the Computer Science Department, and one member was currently involved as a student in a distance education course. Three faculty members had prior experience with the development of survey instruments. Focus group members included the Associate Dean of the School of Education, the Assistant Provost for Distance Learning and Information Resources, the Director of the Center for Teaching and Innovation, the Vocational Teacher Preparation Department Chair, and three faculty members of the School of Education.

In reviewing the opening paragraph of the survey instrument, the focus group felt that, in addition to a cover letter assuring confidentiality, the response rate would increase if the confidentiality issue were addressed again at this point. Although such a reference also existed at the end of the survey instrument, reluctant participants would more than likely never reach that point if they chose not to participate.

Part I of the instrument contained questions related to demographic information (years of teaching, program/content area, current position, academic degree, tenure/tenure-track, online learning experience). The original instrument asked respondents for gender and age in the demographics, but these did not appear in previous research as issues within distance learning. Based on the recommendation of the focus group, response selections for the program/content area were modified to reflect major program areas within teacher education, covering major content areas (science, history/social studies, language arts/reading, mathematics, health occupations, etc.).

Part II of the survey instrument addressed issues related to computer skills (without association to Web-based learning) and to attitudes towards certain issues within distance learning. The focus group identified parts of this section that were not related to the objectives of
the study and recommended that they be removed, specifically the questions dealing with self-reported comfort levels of computer skills. This group suggested that three computer related questions be infused in issue statements presented in the last part of Part II.

*Pilot Study*

From the population database for this study, 20 faculty members from the SUNY Oswego School of Education were randomly selected to participate in a pilot study of the revised survey instrument. A letter was sent requesting their participation and feedback as to item clarity, format and style, along with a printed copy of the survey instrument. The pilot group had the option of responding to the survey questionnaire on paper or an electronic version published on the Web.

The purpose of this pilot study of the survey instrument was to:

1. evaluate the wording of questions and items through the review process by practitioners in teacher education, and
2. evaluate the overall effectiveness of the electronic delivery of the survey instrument, and to determine any problems encountered by participants.

Fourteen responses were received from the original twenty that were distributed. Three faculty elected to respond electronically, with the remaining 11 members choosing to complete the paper questionnaire.

Based on the recommendations of the pilot study group, changes were made to the length of the survey instrument by the removal of several items dealing with computer usage within the classroom. Redundant items were deleted or combined, and modifications were made to the Likert scale expanding the selection to include an additional level of “no basis for knowing.” The option of electronically submitting the questionnaire was also removed at the suggestion of the pilot group members who had difficulty with this form of submission. Technical issues
prevented a number of respondents from submitting their survey instrument, which could ultimately have affected the outcome of the study. The final survey questionnaire was restricted to the paper version only. A second pilot study was done on the new instrument using 10 randomly selected faculty members (with 10 respondents) from SUNY Oswego School of Education. At the conclusion of the second pilot study, minor revisions were made to the instrument and it was put into final format. Suggested changes were minimal; and many were formatting suggestions and “cosmetic” changes.

Data Collection

A coded numbering system was devised for record-keeping purposes, thereby eliminating duplication of reminders for respondents. A survey packet including a cover letter (see Appendix C) and a survey instrument (see Appendix D), and a self-addressed, stamped envelope was mailed to 275 SUNY faculty involved in teacher education. The first survey mailing yielded 105 returns (38%). Returns were recorded by coded number and after the second week a reminder letter and questionnaire were mailed to non-respondents. At the conclusion of the time period for the second mailing, a postcard reminder was mailed to non-respondents. These subsequent mailings produced 65 additional responses (24%) for an overall response rate of 62%.

Two techniques were utilized to address the issue of non-response to the questionnaire. "Late respondents are statistically compared to early respondents using the evaluation data to justify generalizing from the respondents to the sample" (Miller & Smith, 1983, p. 48). Although results revealed no statistically significant difference between the early and late respondents in the present survey, Miller and Smith suggested that this method of addressing non-response can "…leave the results open to question" (p. 49). A more empirically sound procedure they propose is to "double-dip" by selecting a random sample of the non-respondents and conducting a
telephone interview. These responses can then be pooled and generalized to the sample/population. Following the recommendations of Miller and Smith (1983), approximately 10% of the 105 non-respondents were randomly selected to be interviewed by telephone. The 12 interviewees were asked demographic items, questions 39 through 56 regarding agreement or disagreement with major issues, and question 57 dealing with perceived importance of Web-based courses in teacher education. A comparison was done between responses of each group (respondents and non-respondents). No statistically significant difference was found between non-respondents and respondents. The results from the non-respondent interviews were included in the results for those particular survey questions.

The human subjects exemption was requested from the Institutional Review Boards of both Virginia Tech and SUNY Oswego. Clearance forms are contained in Appendix E and Appendix F.

Data Analysis

Collected data were analyzed using the statistical software package SPSS. The use of descriptive statistics allows the researcher to manage and describe the data more efficiently (Babbie, 1990). Descriptive statistics were used to organize, summarize, and describe observations. Appropriate statistics such as frequencies, percentages, and a chi-square test with the alpha set at .05 were used.

Chi-square was used to test the relationship between faculty concerns related to online learning and demographic factors and to determine if there was any significant difference between concerns of faculty who have taught online and those who have not. T-tests, Pearson’s r, and chi-square tests were utilized to determine significance of differences in concerns and
levels of agreement between the experienced and non-experienced groups regarding online learning. Means and standard deviations were used to summarize and describe much of the data.

The open-ended items regarding the importance of Web-based technology in teacher education and reasons for teaching or not teaching online were coded and categorized (a complete listing is contained in Appendix G and H). Direct quotes are used within a narrative summary of respondents’ comments. Open-ended questions serve a vital purpose in the expansion of answers; “…respondents who have the knowledge or who have well-informed opinions on the issue may dislike being restricted to simple response categories that do not permit them to qualify their answers” (Ary et al., 1996, p. 442).

Chapter Summary

This study used a two part questionnaire to gather data from faculty preparing pre-service teachers. It attempted to discover the motivation to use or not use computer-based technology to prepare and deliver required courses via distance education methods. The pilot study resulted in modifications to the original questionnaire content (references to age, gender, and level of computer competence were removed) and format. The computer-based response option was eliminated after difficulties were experienced with some Internet service providers.
Chapter 4

Findings

The purpose of this study was to identify factors that influence the adoption of online courses by State University of New York faculty members engaged in professional development and the preparation of teachers. The level of use of Web instruction in SUNY schools of education, departments of education, and teacher education programs may be affected by factors noted in previous studies, such as inadequate technology, lack of training, professional issues, and student demographics. However, it is also conceivable that the level of Web instruction taking place may be affected by factors not mentioned in previous studies, such as legal issues, learning standards, or course content.

Respondents

During the spring 2002 semester, questionnaire packets were mailed to a sample of 275 State University of New York faculty members involved in the training of teachers. Of this number, 178 returns were received, yielding a 64.7% return rate; however, 8 returns were not usable, bringing the usable return rate to 61.8%. Of the eight, two respondents had moved into totally administrative positions, three retired, one was on sabbatical, and two had left their respective colleges.

Table 1

Survey Questionnaire Respondents

<table>
<thead>
<tr>
<th>Sample</th>
<th>Total Respondents</th>
<th>Usable Responses</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>275</td>
<td>178</td>
<td>170</td>
<td>62%</td>
</tr>
</tbody>
</table>

\(^{a}\) Eight respondents did not complete the questionnaire because they were no longer involved in teacher education.
Two techniques were utilized to address the issue of non-response to the survey. Late respondents were statistically compared with early respondents. (Miller & Smith, 1983). When no statistically significant difference was found, a follow-up technique recommended by Miller and Smith was also used and telephone interviews completed as described in Chapter 3.

Final compilation of results indicated the results were heavily skewed by the responses of adjuncts and instructors/lecturers. The assumption of “normality” was violated. For this reason, it was deemed necessary to consider adjuncts and instructor/lecturers as a separate population and eliminate their responses. Responses from adjuncts and instructor/lecturers were not included in the final analysis for the following reasons:

1. Some were graduate assistants.
2. Adjuncts from the community were teaching one course but had no other academic duties from the college.
3. Adjuncts served their main role as a student teacher supervisor.

Demographics

Part I of the survey instrument contained 10 items related to demographics; complete tables for each item are contained in Appendix I. Early and late respondents are reported in Table I-1 (including adjuncts and instructor/lecturers).

Overwhelmingly, faculty reported that they hold a doctorate (Table I-7), hold the rank of associate professor (Table I-4), are tenured, and have been teaching at the post-secondary level for over 20 years (Table I-2). Table I-3 indicates faculty reported a wide range of specialization areas of teaching (content areas), but primarily the largest number reported elementary education (19.8%).
Of the 126 early and late responses to the question of online teaching (see Table I-8), 36.0% of the faculty have experience in the implementation of online learning technology in their teaching. The remaining 64.0% of the faculty expressed a lack of experience in online learning technology.

Faculty were also asked to identify the online technology programs they had used in the past and were given the choice of SUNY Learning Network (SLN), Blackboard®, WebCT®, and could also fill in the name of a unique program. Table I-9 illustrates not only multiple selections of respondents but also responses from faculty who indicated experience in online technology but not online teaching. The number one program selected by respondents was Blackboard®, a program used by 65.2% of respondents. SLN had been used by 17.4% and WebCT® by 10.9% of the respondents.

Research Questions

A descriptive statistical analysis with means, standard deviations, medians, and modes was completed. After reviewing the distributional characteristics of the results, it was determined that a chi-square statistical analysis should be used to test the relationship between faculty with experience in online teaching and those without. Each of the seven research questions are stated, followed by information used to explain each question.

Factors That Influence SUNY Faculty Members’ Decision to Develop and Implement Online Courses

Research question one asked, “What factors influence SUNY faculty members’ decision to develop and implement online courses?”

For purposes of this study, potential factors were determined based on previous research and categorized as “technological,” “pedagogical,” and “faculty-centered.” Establishing
categories for large amounts of information sharing common elements is a technique suggested by Jolliffe (1986). For each category, respondents were asked to indicate the level of influence of various factors in the decision to implement online courses. Likert scale responses ranged from No Influence (1) to Very Influential (5). The median response of (3) was equated with Neutral, indicating ambivalence towards the influence, while the response of (1) No Influence indicated a distinct lack of influence.

**Technological factors.** As shown in Table 2, the highest mean response (M=3.98) was computed for the technological factor “technical support.” “Network security” had the most diverse response with the highest variability of response (SD=1.34). When asked in a separate question (questionnaire item #22) which of these technological factors in questionnaire items #13-21 would have the most influence on whether they would implement an online course, 45.1% of the faculty indicated the “course development/revision time” would be the most influential. The least influential factors according to the respondents were “network security” and “pace of technological change,” each indicated by 1.8% of the respondents.

**Pedagogical factors.** Within the category of pedagogical factors, Table 3, “nature of course content” was ranked at the highest level (M=4.35). The lowest ranking factor “methods of evaluation/assessment” (M=3.63) still indicated a degree of influence. In response to the question regarding which factor they would consider the most influential, faculty indicated the primary factor “nature of course content” (44.5%). The factor which was rated the least influential of the five factors was “methods of evaluation & assessment” (6.4%).

**Faculty-centered factors.** Responses to the questions about faculty-centered factors which influence the implementation of online courses (see Table 4) revealed the highest level of influence for “faculty load” (M=4.07 with a mode of 5). The lowest ranking factor was
“institutional reward system” (M=2.85). Although all factors shared a relatively high degree of variability, the highest degree of variability occurred in “promotion and tenure” (SD=1.51). The most influential factor was “faculty load” (41.7%). Faculty did not feel “institutional reward system” (5.6%) to be that influential, nor did they consider “annual performance review” of any influence at all (0.0%).
# Table 2

**Technological Factors - Influence on Implementation of Online Courses by Rank Order of Perceived Importance**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Technological Factors Survey Items #13-21</th>
<th>Most Influential Survey Item #22</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Technological Factors</td>
<td>Exp</td>
</tr>
<tr>
<td>1 Course development/revision time</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>2 Technical support</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>3 Connectivity issues/problems</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>4 Hardware/software availability</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>5 Reliability of technology</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>6 Other</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>7 Privacy rights</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>8.5 Network security</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>8.5 Pace of technological change</td>
<td>M</td>
<td>SD</td>
</tr>
</tbody>
</table>

**Total Responses**

<table>
<thead>
<tr>
<th>Exp</th>
<th>Inexp</th>
<th>Total Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>41</td>
<td>71</td>
<td>112</td>
</tr>
</tbody>
</table>

**Note:** Total may not equal 100% as a result of rounding.

Three respondents to Items #13-21 chose not to respond to Item #22.

*a “Other” responses included need for face-to-face contact, and lack of demonstration ability.

Scale 1 = No Influence
2 = Little Influence
3 = Neutral
4 = Influential
5 = Very Influential
Table 3

**Pedagogical Factors - Influence on Implementation of Online Courses by Rank Order of Perceived Importance**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Technological Factors Survey Items #13-21</th>
<th>Most Influential Survey Item #22</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>1 Nature of course content</td>
<td>4.35</td>
<td>0.98</td>
</tr>
<tr>
<td>2 Depersonalization of instruction</td>
<td>3.91</td>
<td>1.28</td>
</tr>
<tr>
<td>3 Class discussion</td>
<td>4.27</td>
<td>0.97</td>
</tr>
<tr>
<td>4 Course objectives</td>
<td>3.99</td>
<td>0.98</td>
</tr>
<tr>
<td>5 Method of evaluation &amp; assessment</td>
<td>3.63</td>
<td>1.12</td>
</tr>
<tr>
<td>6 Other a</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Total responses</td>
<td>40</td>
<td>70</td>
</tr>
</tbody>
</table>

Note: Total may not equal 100% as a result of rounding.

Three respondents to Items #13-21 chose not to respond to Item #22.

“Other” responses included need for face-to-face contact, lack of demonstration ability.

Scale 1 = No Influence  
2 = Little Influence  
3 = Neutral  
4 = Influential  
5 = Very Influential
Table 4

*Faculty Centered Factors - Influence on Implementation of Online Courses by Rank Order of Perceived Importance*

<table>
<thead>
<tr>
<th>Factor</th>
<th>Technological Factors Items #13-21</th>
<th>Most Influential Item #22</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>1 Nature of Faculty Load</td>
<td>4.07</td>
<td>1.23</td>
</tr>
<tr>
<td>2 Level of Administrative Support</td>
<td>3.64</td>
<td>1.34</td>
</tr>
<tr>
<td>3 Intellectual Property Rights</td>
<td>3.32</td>
<td>1.3</td>
</tr>
<tr>
<td>4 Control of Curriculum</td>
<td>3.56</td>
<td>1.25</td>
</tr>
<tr>
<td>5 Promotion and Tenure</td>
<td>2.8</td>
<td>1.51</td>
</tr>
<tr>
<td>6 Institutional Reward System</td>
<td>2.85</td>
<td>1.45</td>
</tr>
<tr>
<td>6 Other *</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Annual Performance Review</td>
<td>2.9</td>
<td>1.42</td>
</tr>
<tr>
<td>Total responses</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Total may not equal 100% as a result of rounding.

Three respondents to Items #13-21 chose not to respond to Item #22.

*“Other” responses included need for face-to-face contact, and lack of demonstration ability.*

Scale 1 = No Influence
2 = Little Influence
3 = Neutral
4 = Influential
5 = Very Influential
Primary Concerns Regarding Teaching of Education Courses Online

Research question two asked, “What are SUNY faculty members’ primary concerns regarding teaching of education courses online?”

For the purpose of this study, potential concerns were determined based on issues identified in previous research and categorized as “institutional,” “technical,” and “faculty-centered” (Joliffe, 1986). In addition to an attitudinal scale of “strongly disagree” to “strongly agree,” respondents were given the option of answering “no basis for knowing” (see Table 5). Final percentages are based on the total number of responses, excluding “no basis for knowing” (Babbie, 1990).

Institutional issues. Responses to three statements within the institutional issue category revealed a relatively close level of agreement with all statements. Over 60% of those who chose to respond indicated “agree” or “strongly agree” to each statement. The highest level of agreement (67.3%) was in response to the statement, “Lack of incentives for teaching classes online is an obstacle to delivery of online instruction.”

Technical issues. The technical issue to which most faculty responded “agree” or “strongly agree” was “Adequate support systems are a major concern to faculty in delivering courses online” with 87.4% of the responses. A high level of agreement was also shown for “online learning technology is difficult to use without the proper training” (85.0%). Of all six statements within the technical issue category, respondents exhibited an almost even level of disagreement and agreement with the statement “online technology limits the use of demonstration” (49.1% and 50.9% respectively).

Faculty-centered issues. Of the nine statements within this category, the highest agreement response rate was for “Web-based delivery is not appropriate for all courses.”
Agreement or strong agreement was indicated by 96.7% of the faculty that Web-based delivery is not appropriate for all courses. Faculty indicated a high level of disagreement with two statements. “Discussion content and quality are better in the online class” (80.0%) and “Online delivery of instruction is at least as effective as teaching face-to-face” (73.9%). Half of the respondents (50.0%) felt they had “no basis for knowing” in regards to the statement “Students taught online perform at least as well as those taught in a traditional face-to-face classroom.” For that same issue, the level of disagreement and agreement was fairly divided with 47.5% indicating disagreement and 52.4% agreement.

_Relationship of Faculty Concerns to Selected Demographics_

Research question three asked, “To what extent are SUNY faculty’s concerns about online courses related to their (a) years of teaching, (b) content area affiliation, (c) current position, (d) academic degree, and (e) tenure status?”

Pearson’s correlations were used to describe associations between demographic factors and three areas of issues to which faculty were asked their level of agreement. The magnitude of association ranged from “Little, If Any” to “Strong Association.” Strength of association values were modified from those suggested by D. E. Martin (n.d.), in which he used a table of six values, as follows:

- 0.80-1.00   Strong Association between Variables
- 0.60-0.79   Strong-Moderate Association
- 0.40-0.59   Weak-Moderate Association
- 0.30-0.39   Strong-Weak Association
- 0.20-0.29   Weak-Weak Association
- 0.00-0.19   Little, If Any Association
Of the three issues presented under the category of Institutional issues (see Table 6), there was a high positive correlation between three of the demographic variables [Years of Experience (r=.960), Faculty Rank (r=.860), and Highest Degree (r=.944)] and one issue statement (“Lack of clear institutional policies on the use of online technology affects its adoption by faculty”). The higher the degree, years of experience, and rank, the more faculty tended to agree or strongly agree with the issues presented.

All six technical issues (see Table 7) were positively correlated to at least one of the four demographic factors. Strong association was reflected by Faculty Rank on four of the technical issues. Faculty Rank was positively correlated to issues dealing with technology being difficult to use without training (r=.909), adequate support systems (r=.997), faculty lack technical knowledge (r=.838) and online technology limits the use of demonstration (r=.910).

Table 8 reflects associations between the demographic factors and nine issues categorized as Faculty-centered. Association appeared strongest for six relationships within these issues. Degree level was positively correlated to the issue dealing with faculty having control of intellectual property (r=.831) and discussion content and quality being better online (r=.932). Within the variable of Years of Experience, there was strong association for “online courses lack cohesion or sense of community” (r=.837) and also for “cheating in an online course is a common threat to the quality of online classes” (r=.912) according to Years of Experience. Issues addressing the effectiveness of online delivery of instruction, student performing as well as those taught face-to-face, and student-teacher interaction being difficult online exhibited the weakest association for a number of demographic factors.
Table 5

*Institutional, Technical, and Faculty-centered Issues – Frequency Distribution of Faculty Level of Agreement*

Survey items #39-55

<table>
<thead>
<tr>
<th>Issue</th>
<th>No Basis for Knowing</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Institutional Issues</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of incentives for teaching classes online is an obstacle to delivery of online instruction</td>
<td>10</td>
<td>10</td>
<td>27</td>
<td>55</td>
<td>21</td>
<td>113</td>
</tr>
<tr>
<td>Lack of clear institutional policies on use of online technology affects its adoption by faculty</td>
<td>13</td>
<td>10.7</td>
<td>8</td>
<td>35</td>
<td>47</td>
<td>19</td>
</tr>
<tr>
<td>Classroom based courses and online courses are given the same weight in terms of faculty load</td>
<td>32</td>
<td>25.6</td>
<td>11</td>
<td>22</td>
<td>38</td>
<td>19</td>
</tr>
<tr>
<td><strong>Technical Issues</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Online learning technology is difficult to use without the proper training</td>
<td>3</td>
<td>2.4</td>
<td>4</td>
<td>14</td>
<td>58</td>
<td>44</td>
</tr>
<tr>
<td>Adequate support systems are a major concern to faculty in delivering courses online</td>
<td>4</td>
<td>3.3</td>
<td>5</td>
<td>10</td>
<td>57</td>
<td>47</td>
</tr>
<tr>
<td>Lack of adequate information about online learning technology affects its use by some faculty</td>
<td>2</td>
<td>1.6</td>
<td>6</td>
<td>22</td>
<td>69</td>
<td>24</td>
</tr>
<tr>
<td>Problems with equipment are a major concern to faculty in delivering courses online</td>
<td>8</td>
<td>6.6</td>
<td>3</td>
<td>27</td>
<td>50</td>
<td>34</td>
</tr>
<tr>
<td>Faculty lack the technical knowledge to handle online learning technology and equipment</td>
<td>6</td>
<td>4.9</td>
<td>7</td>
<td>35</td>
<td>42</td>
<td>33</td>
</tr>
</tbody>
</table>
### Faculty-centered Issues

Web-based delivery is not appropriate for all courses

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1 | .8 | 1 | .8 | 3 | 2.5 | 47 | 38.8 | 70 | 57.9 | 121 |

Faculty time commitment is greater for online class preparation

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 20 | 16.3 | 3 | 2.9 | 8 | 7.8 | 50 | 48.5 | 42 | 40.8 | 103 |

Teacher-student interaction is difficult when using online technology to deliver instruction

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 16 | 13.1 | 7 | 6.6 | 37 | 34.9 | 45 | 42.5 | 17 | 16.0 | 106 |

Online courses lack cohesion or sense of community

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 12 | 9.9 | 12 | 11.0 | 36 | 33.0 | 39 | 35.8 | 22 | 20.2 | 109 |

A faculty member does *not* have complete control of his/her intellectual property with online courses

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 20 | 16.3 | 6 | 5.8 | 30 | 29.1 | 50 | 48.5 | 17 | 16.5 | 103 |

Cheating in an online course is a common threat to the quality of online courses

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 35 | 28.7 | 1 | 1.1 | 25 | 28.7 | 53 | 60.9 | 8 | 9.2 | 87 |

Online delivery of instruction is at least as effective as teaching face-to-face

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 14 | 11.6 | 34 | 31.8 | 45 | 42.1 | 23 | 21.5 | 5 | 4.7 | 107 |

Discussion content and quality are better in the online class

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 26 | 21.3 | 18 | 18.9 | 58 | 61.1 | 12 | 12.6 | 7 | 7.4 | 95 |

Students taught online perform at least as well as those in a traditional face-to-face classroom

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 60 | 49.6 | 13 | 21.3 | 16 | 26.2 | 26 | 42.6 | 6 | 9.8 | 61 |

Note: Total may not equal 100% as a result of rounding.

Table 5 does not include responses distributed between experienced and inexperienced faculty.
Table 6

Pearson’s Correlation Between Institutional Issues and Selected Demographics

<table>
<thead>
<tr>
<th>Institutional Issues</th>
<th>Years of Experience</th>
<th>Faculty Rank</th>
<th>Tenure Status</th>
<th>Highest Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of clear institutional policies on the use of online technology affects its adoption by faculty</td>
<td>.960 ( S )</td>
<td>.860 ( S )</td>
<td>.375 ( W )</td>
<td>.944 ( S )</td>
</tr>
<tr>
<td>Lack of incentives for teaching classes online is an obstacle to delivery of online instruction</td>
<td>.331 ( W )</td>
<td>.610 ( M )</td>
<td>.762 ( M )</td>
<td>.735 ( M )</td>
</tr>
<tr>
<td>Classroom based courses and online courses are given the same weight in terms of faculty load</td>
<td>.038 ( W )</td>
<td>.015 ( L )</td>
<td>.054 ( L )</td>
<td>.029 ( L )</td>
</tr>
</tbody>
</table>

\( S \) 0.80-1.00 Strong association  
\( M \) 0.40-0.79 Moderate association  
\( W \) 0.20-0.39 Weak association  
\( L \) 0.00-0.19 Little, if any, association between variables
Table 7

Pearson’s Correlation Between Technical Issues and Selected Demographics

<table>
<thead>
<tr>
<th>Technical Issues</th>
<th>Years of Experience</th>
<th>Faculty Rank</th>
<th>Tenure Status</th>
<th>Highest Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of adequate information about online learning technology affects its use by some faculty</td>
<td>.712&lt;sup&gt;M&lt;/sup&gt;</td>
<td>.765&lt;sup&gt;M&lt;/sup&gt;</td>
<td>.501&lt;sup&gt;M&lt;/sup&gt;</td>
<td>.944&lt;sup&gt;S&lt;/sup&gt;</td>
</tr>
<tr>
<td>Online learning technology is difficult to use without the proper training</td>
<td>.441&lt;sup&gt;M&lt;/sup&gt;</td>
<td>.909&lt;sup&gt;S&lt;/sup&gt;</td>
<td>.274&lt;sup&gt;W&lt;/sup&gt;</td>
<td>.690&lt;sup&gt;M&lt;/sup&gt;</td>
</tr>
<tr>
<td>Problems with equipment are a major concern to faculty in delivering courses online</td>
<td>.789&lt;sup&gt;M&lt;/sup&gt;</td>
<td>.620&lt;sup&gt;M&lt;/sup&gt;</td>
<td>.741&lt;sup&gt;M&lt;/sup&gt;</td>
<td>.824&lt;sup&gt;S&lt;/sup&gt;</td>
</tr>
<tr>
<td>Adequate support systems are a major concern to faculty in delivering courses online</td>
<td>.642&lt;sup&gt;M&lt;/sup&gt;</td>
<td>.997&lt;sup&gt;S&lt;/sup&gt;</td>
<td>.578&lt;sup&gt;M&lt;/sup&gt;</td>
<td>.449&lt;sup&gt;M&lt;/sup&gt;</td>
</tr>
<tr>
<td>Faculty lack the technical knowledge to handle online learning technology and equipment</td>
<td>.907&lt;sup&gt;S&lt;/sup&gt;</td>
<td>.838&lt;sup&gt;S&lt;/sup&gt;</td>
<td>.690&lt;sup&gt;M&lt;/sup&gt;</td>
<td>.633&lt;sup&gt;M&lt;/sup&gt;</td>
</tr>
<tr>
<td>Online technology limits the use of demonstration</td>
<td>.641&lt;sup&gt;M&lt;/sup&gt;</td>
<td>.910&lt;sup&gt;S&lt;/sup&gt;</td>
<td>.478&lt;sup&gt;M&lt;/sup&gt;</td>
<td>.249&lt;sup&gt;W&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>S</sup> 0.80-1.00 Strong Association  
<sup>M</sup> 0.40-0.79 Moderate Association  
<sup>W</sup> 0.20-0.39 Weak Association  
<sup>L</sup> 0.00-0.19 Little, If Any, Association between variables
Table 8

Pearson’s Correlation Between Faculty-centered Issues and Selected Demographics

<table>
<thead>
<tr>
<th>Faculty-centered Issues</th>
<th>Years of Experience</th>
<th>Faculty Rank</th>
<th>Tenure Status</th>
<th>Highest Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty time commitment is greater for online class preparation, delivery and revision</td>
<td>.079&lt;sup&gt;L&lt;/sup&gt;</td>
<td>.289&lt;sup&gt;W&lt;/sup&gt;</td>
<td>.415&lt;sup&gt;M&lt;/sup&gt;</td>
<td>.560&lt;sup&gt;M&lt;/sup&gt;</td>
</tr>
<tr>
<td>A faculty member does NOT have complete control of his/her intellectual property with online courses</td>
<td>.010&lt;sup&gt;L&lt;/sup&gt;</td>
<td>.353&lt;sup&gt;W&lt;/sup&gt;</td>
<td>.353&lt;sup&gt;W&lt;/sup&gt;</td>
<td>.831&lt;sup&gt;S&lt;/sup&gt;</td>
</tr>
<tr>
<td>Online delivery of instruction is at least as effective, as teaching students face-to-face</td>
<td>.187&lt;sup&gt;L&lt;/sup&gt;</td>
<td>.015&lt;sup&gt;L&lt;/sup&gt;</td>
<td>.005&lt;sup&gt;L&lt;/sup&gt;</td>
<td>.777&lt;sup&gt;M&lt;/sup&gt;</td>
</tr>
<tr>
<td>Online courses lack cohesion or sense of community</td>
<td>.837&lt;sup&gt;S&lt;/sup&gt;</td>
<td>.940&lt;sup&gt;S&lt;/sup&gt;</td>
<td>.650&lt;sup&gt;M&lt;/sup&gt;</td>
<td>.662&lt;sup&gt;M&lt;/sup&gt;</td>
</tr>
<tr>
<td>Web-based delivery is not appropriate for all courses</td>
<td>.422&lt;sup&gt;M&lt;/sup&gt;</td>
<td>.315&lt;sup&gt;W&lt;/sup&gt;</td>
<td>.842&lt;sup&gt;S&lt;/sup&gt;</td>
<td>.065&lt;sup&gt;L&lt;/sup&gt;</td>
</tr>
<tr>
<td>Discussion content and quality are better in the online class</td>
<td>.645&lt;sup&gt;M&lt;/sup&gt;</td>
<td>.288&lt;sup&gt;W&lt;/sup&gt;</td>
<td>.147&lt;sup&gt;L&lt;/sup&gt;</td>
<td>.932&lt;sup&gt;S&lt;/sup&gt;</td>
</tr>
<tr>
<td>Cheating in an online course is a common threat to the quality of online classes</td>
<td>.912&lt;sup&gt;S&lt;/sup&gt;</td>
<td>.725&lt;sup&gt;M&lt;/sup&gt;</td>
<td>.293&lt;sup&gt;W&lt;/sup&gt;</td>
<td>.773&lt;sup&gt;M&lt;/sup&gt;</td>
</tr>
<tr>
<td>Students taught online perform at least as well as those taught in a traditional face-to-face classroom</td>
<td>.205&lt;sup&gt;W&lt;/sup&gt;</td>
<td>.079&lt;sup&gt;L&lt;/sup&gt;</td>
<td>.031&lt;sup&gt;L&lt;/sup&gt;</td>
<td>.606&lt;sup&gt;M&lt;/sup&gt;</td>
</tr>
<tr>
<td>Teacher-student interaction is difficult when using online technology to deliver instruction</td>
<td>.005&lt;sup&gt;L&lt;/sup&gt;</td>
<td>.110&lt;sup&gt;L&lt;/sup&gt;</td>
<td>.059&lt;sup&gt;L&lt;/sup&gt;</td>
<td>.572&lt;sup&gt;M&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>S</sup> 0.80-1.00 Strong association  
<sup>M</sup> 0.40-0.79 Moderate association  
<sup>W</sup> 0.20-0.39 Weak association  
<sup>L</sup> 0.00-0.19 Little, if any, association between variables
Extent to Which SUNY Faculty Responses Agree with Findings of Previous Research

Research question 4 asked: “How do the findings of this study compare to those of previous studies regarding the institutional, technical, and faculty-centered issues that affect the development and implementation of online courses?”

Table 5 (pp. 56-57) displays the frequency of responses for Institutional, Technical, and Faculty-centered issues as a result of this survey. Table 9 compares responses to earlier research findings with the understanding that many of the previous studies were qualitative and directed at a wide range of distance education issues.

The current study parallels previous studies on a number of issues. The greatest concerns appear to exist in the areas of teacher-student interaction, the necessity for training and support systems, and the issue of course content suitability to the online learning medium.

Ways in Which SUNY Faculty with Experience and Without Experience Differ in Demographics, Concerns and Agreement with Related Issues

Research question 5 asked, “In what ways do SUNY faculty who have taught online and those who have not differ in demographics, concerns and agreement with related issues?”

Demographics. Table 10 illustrates the frequency of responses for six demographic questions categorized by experience and inexperience in online learning technology and also shows the Chi-square findings for each. Significance was found in response to the question asking experienced and inexperienced faculty if they would “use or continue to use” online learning technology (p=.000).
Table 9

Comparison of Findings of Earlier Studies and Current Study According to Institutional, Technical, and Faculty-centered Issues

<table>
<thead>
<tr>
<th>Institutional Issues</th>
<th>Previous Research</th>
<th>SUNY SCDE Faculty Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of incentives for teaching classes online is an obstacle to delivery of online instruction</td>
<td>Ndahi’s 1998 study reported 74.7% in agreement that incentives to teach online were lacking</td>
<td>67.2% agree/strongly agreed that incentives were lacking</td>
</tr>
<tr>
<td>Lack of clear institutional policies on use of online technology affects its adoption by faculty</td>
<td>The Institute for Higher Education Policy (1999): colleges and universities would be challenged to assist faculty members in the integration of technology.</td>
<td>60.5% agreed/strongly agreed that institutional policies were lacking</td>
</tr>
<tr>
<td>Classroom based courses and online courses are given the same weight in terms of faculty load</td>
<td>Faculty were concerned they did more work for the same amount of pay (NEA, 2000)</td>
<td>63% agreed/strongly agreed; SUNY SCDE faculty believe that online courses and classroom based courses are given same weight.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Technical Issues</th>
<th>Previous Research</th>
<th>SUNY SCDE Faculty Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online learning technology is difficult to use without the proper training</td>
<td>Ndahi (1998): 89.9% agreed or strongly agreed that online learning technology difficult to use without proper training. Falba (1998): 44% of respondents cited time to learn programs as factor in online teaching</td>
<td>85% agreed/strongly agreed that proper training is required</td>
</tr>
<tr>
<td>Adequate support systems are a major concern to faculty in delivering courses online</td>
<td>Online courses require a supportive system that teaches the teacher the appropriate techniques for instruction online (USDLA, 2000) Faculty avoided technology in their instruction because technical support was lacking (Shifter, 1999; Matthew, Parker, and Wilkinson, 1998)</td>
<td>87.7% agreed/strongly agreed that support systems are a major concern</td>
</tr>
<tr>
<td>Lack of adequate information about online learning technology affects its use by some faculty</td>
<td>Bednar and Charles (1999): need for supportive infrastructure and faculty concern for the time required to develop or prepare distance education courses</td>
<td>76.8% agreed/strongly agreed</td>
</tr>
<tr>
<td><strong>Issues</strong></td>
<td><strong>Previous Research</strong></td>
<td><strong>SUNY SCDE Faculty Responses</strong></td>
</tr>
<tr>
<td>------------</td>
<td>-----------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>Faculty lack the technical knowledge to handle online learning technology and equipment</td>
<td>62% of respondents lacked knowledge regarding distance education technology (Falba, 1998) No time available to learn computer-related technology, no access to equipment and software, no training available to learn how to use new technologies (Schmidt, 1995) Obstacles included cost of hardware, software and Internet service providers, hardware and software problems, out of date Web-sites and links, connectivity problems, need for staff development and lack of administrative support (Nania, 1999; Liu &amp; Thomson, 1999; Nasseh, 1999)</td>
<td>64.1% agreed/strongly agreed 62% of respondents lacked knowledge regarding distance education technology (Falba, 1998) No time available to learn computer-related technology, no access to equipment and software, no training available to learn how to use new technologies (Schmidt, 1995) Obstacles included cost of hardware, software and Internet service providers, hardware and software problems, out of date Web-sites and links, connectivity problems, need for staff development and lack of administrative support (Nania, 1999; Liu &amp; Thomson, 1999; Nasseh, 1999) 64.1% agreed/strongly agreed (This was a key area for earlier research efforts and remains a concern now)</td>
</tr>
<tr>
<td><strong>Faculty-centered Issues</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Web-based delivery is not appropriate for all courses</td>
<td>Traditional liberal arts courses, business, and computer science courses are appropriate to online formats (IHEP, 1999) Selection of appropriate content was a key factor in the successful delivery of online material (Nania, 1999)</td>
<td>96.6% agreed/strongly agreed Recognition that course content lends itself (or does not) to an online medium 96.6% agreed/strongly agreed Recognition that course content lends itself (or does not) to an online medium</td>
</tr>
<tr>
<td>Faculty time commitment is greater for online class preparation</td>
<td>53% of distance education faculty spend MORE hours in preparation for classes than traditional classes (NEA, 2000)</td>
<td>89.3% agreed/strongly agreed</td>
</tr>
<tr>
<td>Teacher-student interaction is difficult when using online technology to deliver instruction</td>
<td>Students online do not participate and are not engaged in an interaction (Guernsey, 1998). Students value interaction: “support for the importance of seeing, hearing, and having contact with professors” (Ryan, Carlton &amp; Ali, 1999, p. 5) “Frequent student-faculty contact in and out of the class is the most important factor in student motivation” (University of Illinois, 199, p. 25).</td>
<td>58.4% agreed/strongly agreed</td>
</tr>
</tbody>
</table>
**Issues**

A faculty member does NOT have complete control of intellectual property with online courses

Online delivery of instruction is at least as effective as teaching face-to-face

Students taught online perform at least as well as those in a traditional face-to-face classroom

**Previous Research**

77.3% agreed/strongly agreed (Ndahi, 1998)

Instructors rated the quality of distance learning equal to or lower than campus based courses (Inman, Kerwin, and Mayer, 1999)

Distance education dehumanizes students (Novek, 1999)

“Approximately 45% of the respondents felt their online students performed better than their classroom students did. About 44% felt there was no difference in the student performance” (Frederickson, et al., 1999b)

Web-based instruction failed to produce desirable pedagogical outcomes or to achieve a level of student’s interaction adequate to facilitate learning (Nasseh, 1999; Novek, 1999)

Level of interaction provided by online instruction allowed learning to take place (Perrin, 1999) Other researchers disagreed (Crow, 1999; Guernsey, 1998; Hassenplug & Harnish, 1998; Nasseh, 1999; Novek, 1999)

**SUNY SCDE Faculty Responses**

65% agreed/strongly agreed

Concerns for quality were reflected in current study: Only 26% agreed/strongly agreed while 73.8% disagreed/strongly disagreed that online instruction is as effective as teaching in a traditional setting.

49.6% indicated they had no basis for knowing
Years of Teaching. Of the 45 experienced faculty members, the largest percentage have over 20 years of experience (35.6%); a similar percentage resulted among the inexperienced faculty (30.0%). Distribution of responses for other categories of years indicated a fairly even ratio between experienced and inexperienced faculty.

Content Area/Specialization. The largest percentage of faculty were found in Elementary Education for both experienced and inexperienced faculty (17.8% and 21.3% respectively). The smallest response from experienced faculty was received for Foreign Language, Agriculture, and Family and Consumer Sciences; each only having one faculty member (2.2%) reporting that as their specialization area. Similarly, inexperienced faculty numbered 3 in Foreign Language and none in Agriculture or Family and Consumer Sciences.

Faculty Academic Rank. Almost half of the experienced and inexperienced faculty responded that they hold the rank of Associate Professor (48.9% and 43.8% respectively).

Have Tenure. The highest percentage of faculty experienced in Web-based teaching have tenure (73.3%), compared to 65.0% of the inexperienced faculty.

Highest Academic Degree. Faculty having experience in online learning indicated they hold a doctorate (95.6%). The inexperienced faculty also exhibited the largest percentage holding a doctorate (91.2%). The Master’s level was the next ranking degree for the experienced faculty (4.4%) and also for the inexperienced faculty (8.8%).

Use or Continue to Use Online Technology. Experienced faculty indicated that they would continue to use online learning (86.7%), while the inexperienced faculty were divided between their responses (42.5% “yes” and 43.8% “no”). The inexperienced faculty also indicated “Maybe/Uncertain” at a higher rate (13.8%) than the experienced faculty (4.4%).
Table 10
Frequencies by Demographics Between Experienced and Inexperienced Faculty in Online Learning Technology

<table>
<thead>
<tr>
<th></th>
<th>Experienced</th>
<th>Inexperienced</th>
<th>Value</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Years of Teaching</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 – 5</td>
<td>6</td>
<td>13.3</td>
<td>8</td>
<td>10.0</td>
<td></td>
</tr>
<tr>
<td>6 – 10</td>
<td>10</td>
<td>22.2</td>
<td>17</td>
<td>21.3</td>
<td></td>
</tr>
<tr>
<td>11 – 15</td>
<td>7</td>
<td>15.6</td>
<td>22</td>
<td>27.5</td>
<td></td>
</tr>
<tr>
<td>16 – 20</td>
<td>6</td>
<td>13.3</td>
<td>9</td>
<td>11.3</td>
<td></td>
</tr>
<tr>
<td>Over 20</td>
<td>16</td>
<td>35.6</td>
<td>24</td>
<td>30.0</td>
<td>2.451</td>
</tr>
<tr>
<td><strong>Content Area/Specialization</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary Education</td>
<td>8</td>
<td>17.8</td>
<td>17</td>
<td>21.3</td>
<td></td>
</tr>
<tr>
<td>Other a</td>
<td>7</td>
<td>15.6</td>
<td>14</td>
<td>17.5</td>
<td></td>
</tr>
<tr>
<td>Special Education</td>
<td>5</td>
<td>11.1</td>
<td>14</td>
<td>17.5</td>
<td></td>
</tr>
<tr>
<td>Literacy Education</td>
<td>4</td>
<td>8.9</td>
<td>12</td>
<td>15.0</td>
<td></td>
</tr>
<tr>
<td>Science Education</td>
<td>5</td>
<td>11.1</td>
<td>8</td>
<td>10.0</td>
<td></td>
</tr>
<tr>
<td>Technology Education</td>
<td>5</td>
<td>11.1</td>
<td>5</td>
<td>6.3</td>
<td></td>
</tr>
<tr>
<td>Mathematics Education</td>
<td>5</td>
<td>11.1</td>
<td>4</td>
<td>5.0</td>
<td></td>
</tr>
<tr>
<td>History/Social Studies Education</td>
<td>3</td>
<td>6.7</td>
<td>3</td>
<td>3.8</td>
<td></td>
</tr>
<tr>
<td>Foreign Language Education</td>
<td>1</td>
<td>2.2</td>
<td>3</td>
<td>3.8</td>
<td></td>
</tr>
<tr>
<td>Agriculture Education</td>
<td>1</td>
<td>2.2</td>
<td>0</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>Family &amp; Consumer Sciences Educ.</td>
<td>1</td>
<td>2.2</td>
<td>0</td>
<td>0.0</td>
<td>8.507</td>
</tr>
<tr>
<td><strong>Faculty Academic Rank</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>11</td>
<td>24.4</td>
<td>27</td>
<td>33.8</td>
<td></td>
</tr>
<tr>
<td>Associate Professor</td>
<td>22</td>
<td>48.9</td>
<td>35</td>
<td>43.8</td>
<td></td>
</tr>
<tr>
<td>Professor</td>
<td>12</td>
<td>26.7</td>
<td>18</td>
<td>22.5</td>
<td>1.195</td>
</tr>
<tr>
<td><strong>Have Tenure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>33</td>
<td>73.3</td>
<td>52</td>
<td>65.0</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>12</td>
<td>26.7</td>
<td>28</td>
<td>35.0</td>
<td>.919</td>
</tr>
<tr>
<td><strong>Highest Academic Degree</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Master’s</td>
<td>2</td>
<td>4.4</td>
<td>7</td>
<td>8.8</td>
<td></td>
</tr>
<tr>
<td>Doctorate</td>
<td>43</td>
<td>95.6</td>
<td>73</td>
<td>91.2</td>
<td>.799</td>
</tr>
<tr>
<td><strong>Use or Continue to Use Online Technology</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>39</td>
<td>86.7</td>
<td>34</td>
<td>42.5</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>4</td>
<td>8.9</td>
<td>35</td>
<td>43.8</td>
<td></td>
</tr>
<tr>
<td>Maybe/Uncertain</td>
<td>2</td>
<td>4.4</td>
<td>11</td>
<td>13.8</td>
<td>23.236</td>
</tr>
<tr>
<td><strong>SECTION TOTALS</strong></td>
<td>45</td>
<td></td>
<td>80</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. Total may not equal 100% as a result of rounding

*a "Other" responses included generic areas such as Curriculum & Instruction, Secondary Education, and Teacher Education.

*p < .05
Concerns and Agreement

The second part of research question 5 addresses whether or not faculty who have taught online and those who have not differ in concerns and agreement with related issues.

Respondents were given a Likert scale of responses from which they could select their level of agreement, including a selection of “No Basis for Knowing” and a range of “Strongly Disagree” to “Strongly Agree.” Responses indicating “No Basis for Knowing” were excluded from the t-test analysis. Table 11 displays the analyses of data using t-tests between experienced and inexperienced faculty.

Institutional issues. Of three statements concerning Institutional issues, experienced and inexperienced faculty differed only on statement I-3 (p=.002). “Classroom based courses and online courses are given the same weight in terms of faculty load” was the only Institutional issue statement where a strong difference occurred. Experienced faculty members were more inclined towards agreement (M=2.56) with this statement and inexperienced faculty members inclined to disagree (M=1.71).

Technical issues. Of the six statements within the category Technical Issues, no significant differences were found between the experienced and inexperienced faculty.

Faculty-centered issues. Three of the nine statements within the faculty-centered issues were significant at the p<.05 level. The F-2 statement “Faculty time commitment is greater for online class preparation” indicated p=.012. Experienced faculty more often agreed with this statement (M=3.16). The last two statements F-8 and F-9 dealing with discussion content and quality, and student performing as well online resulted in p=.000 and p=.002 respectively.
Table 11
Analysis of the Degree to Which Experienced and Inexperienced Faculty Differ in Their Agreement with Institutional, Technical, and Faculty-centered Issues

<table>
<thead>
<tr>
<th></th>
<th>Experienced</th>
<th>Inexperienced</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Institutional Issues</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-1 Lack of incentives for teaching classes online is an obstacle to delivery of online instruction</td>
<td>2.50</td>
<td>1.210</td>
<td>2.57</td>
<td>1.070</td>
<td>.330</td>
</tr>
<tr>
<td>I-2 Lack of clear institutional policies on use of online technology affects its adoption by faculty</td>
<td>2.65</td>
<td>1.066</td>
<td>2.29</td>
<td>1.189</td>
<td>1.655</td>
</tr>
<tr>
<td>I-3 Classroom based courses and online courses are given the same weight in terms of faculty load</td>
<td>2.56</td>
<td>1.368</td>
<td>1.71</td>
<td>1.407</td>
<td>3.217</td>
</tr>
<tr>
<td><strong>Technical Issues</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T-1 Online learning technology is difficult to use without the proper training</td>
<td>2.95</td>
<td>.861</td>
<td>3.19</td>
<td>.921</td>
<td>1.390</td>
</tr>
<tr>
<td>T-2 Adequate support systems are a major concern to faculty in delivering courses online</td>
<td>3.18</td>
<td>.815</td>
<td>3.09</td>
<td>1.028</td>
<td>.518</td>
</tr>
<tr>
<td>T-3 Lack of adequate information about online learning technology affects its use by some faculty</td>
<td>2.82</td>
<td>.756</td>
<td>2.90</td>
<td>.886</td>
<td>.509</td>
</tr>
<tr>
<td>T-4 Problems with equipment are a major concern to faculty in delivering courses online</td>
<td>2.82</td>
<td>.971</td>
<td>2.81</td>
<td>1.140</td>
<td>.051</td>
</tr>
<tr>
<td>T-5 Faculty lack the technical knowledge to handle online learning technology and equipment</td>
<td>2.68</td>
<td>1.073</td>
<td>2.75</td>
<td>1.080</td>
<td>.321</td>
</tr>
<tr>
<td>T-6 Online technology limits the use of demonstration</td>
<td>2.47</td>
<td>1.141</td>
<td>2.54</td>
<td>1.283</td>
<td>.959</td>
</tr>
<tr>
<td><strong>Faculty-centered Issues</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F-1 Web-based delivery is not appropriate for all courses</td>
<td>3.57</td>
<td>.587</td>
<td>3.47</td>
<td>.716</td>
<td>.740</td>
</tr>
<tr>
<td>F-2 Faculty time commitment is greater for online class preparation</td>
<td>3.16</td>
<td>1.033</td>
<td>2.51</td>
<td>1.501</td>
<td>2.564</td>
</tr>
<tr>
<td>F-3 Teacher-student interaction is difficult when using online</td>
<td>2.36</td>
<td>.990</td>
<td>2.31</td>
<td>1.292</td>
<td>.249</td>
</tr>
</tbody>
</table>
technology to deliver instruction

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Mean</th>
<th>SD</th>
<th>Median</th>
<th>p-value</th>
<th>N</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>F-4</td>
<td>Online courses lack cohesion or sense of community</td>
<td>2.46</td>
<td>1.007</td>
<td>2.36</td>
<td>1.279</td>
<td>.367</td>
<td>119</td>
</tr>
<tr>
<td>F-5</td>
<td>A faculty member does not have complete control of his/her intellectual property with online courses</td>
<td>2.43</td>
<td>1.021</td>
<td>2.24</td>
<td>1.370</td>
<td>.809</td>
<td>121</td>
</tr>
<tr>
<td>F-6</td>
<td>Cheating in an online course is a common threat to the quality of online courses</td>
<td>2.18</td>
<td>1.187</td>
<td>1.87</td>
<td>1.454</td>
<td>1.206</td>
<td>120</td>
</tr>
<tr>
<td>F-7</td>
<td>Online delivery of instruction is at least as effective as teaching face-to-face</td>
<td>1.90</td>
<td>1.087</td>
<td>1.68</td>
<td>.994</td>
<td>1.132</td>
<td>119</td>
</tr>
<tr>
<td>F-8</td>
<td>Discussion content and quality are better in the online class</td>
<td>2.19</td>
<td>1.160</td>
<td>1.33</td>
<td>.949</td>
<td>4.366</td>
<td>119</td>
</tr>
<tr>
<td>F-9</td>
<td>Students taught online perform at least as well as those in a traditional face-to-face classroom</td>
<td>1.72</td>
<td>1.517</td>
<td>.94</td>
<td>1.220</td>
<td>3.101</td>
<td>119</td>
</tr>
</tbody>
</table>

*Note.* Total may not equal 100% as a result of rounding.

* p < .05

**SCALE:**

0 NBK = No Basis for Knowing  
1 SD = Strongly Disagree  
2 D = Disagree  
3 A = Agree  
4 SA = Strongly Agree
Reasons SUNY Faculty Decide Not to Teach Online

Research question six asked, “What are the primary reasons SUNY faculty decide not to teach online?”

Faculty were first asked if they would use online technology to deliver instruction (see Figure 1). This was followed by an open-ended question which asked faculty to give two primary reasons why they would or would not use online technology to deliver instruction (see Appendix I). The primary question addresses the issue of non-use of online technology for teaching purposes. Narrative responses which were positive are also summarized in Appendix I.

![Would or Would Not Teach Online](image)

Figure 1  Response to survey instrument question asking “In the future, will you use online technology to deliver instruction?”

Of the 125 responses, 58.4% indicated that they would use online technology, with 31.2% stating they would not. The remaining 10% selected a third response of “Maybe.” Of the 39 faculty members who gave negative responses, 27 completed a narrative reason why they would not choose to use online technology to deliver instruction. These responses were coded by similarities and common elements (Babbie, 1990; Joliffe, 1986) and placed into seven categories. Table 12 summarizes these responses. Of faculty members who gave a narrative response, the
number one response of faculty (25.9%) was “course content unsuitable.” “Other” responses which included very personal and unique reasons was the second highest response (22.2%).

Table 12

*Reasons Why Faculty Choose Not to Use Online Technology to Deliver Instruction by Rank Order*
Survey Items #11, 12

<table>
<thead>
<tr>
<th>Reason</th>
<th>Exp</th>
<th>Inexp</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course content unsuitable</td>
<td>1</td>
<td>6</td>
<td>25.9</td>
</tr>
<tr>
<td>Othera</td>
<td>1</td>
<td>5</td>
<td>22.2</td>
</tr>
<tr>
<td>Discussion/collaboration missing</td>
<td>1</td>
<td>3</td>
<td>14.8</td>
</tr>
<tr>
<td>Retirement plans</td>
<td>0</td>
<td>4</td>
<td>14.8</td>
</tr>
<tr>
<td>Face-to-Face absent/personal contact</td>
<td>0</td>
<td>3</td>
<td>11.1</td>
</tr>
<tr>
<td>Lack of time/support</td>
<td>0</td>
<td>2</td>
<td>7.4</td>
</tr>
<tr>
<td>Need more research</td>
<td>0</td>
<td>1</td>
<td>3.7</td>
</tr>
<tr>
<td><strong>Total Responses</strong></td>
<td>3</td>
<td>24</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Total may not equal 100% as a result of rounding.
Responses reflect multiple selections by respondents.

*a “Other” responses included personal reactions such as Don’t like it, Not interested, and Doesn’t suit me.*
Importance of Web-based Teaching in Teacher Education

Research question seven asked, “How important do SUNY faculty believe Web-based teaching is in teacher education?”

Table 13 shows 85 faculty members (70.3%) rated Web-based teaching as being “Important” or Very Important.” “Unimportant” and “Very Unimportant” were indicated by 29.8% of respondents.

Survey respondents were given an open-ended question asking them to explain the reason for their selection. Responses were coded into 10 categories (see Table 12). Of the 121 respondents who indicated a level of importance of Web-based instruction, 76.0% gave a self-reported reason for their choice. The number one coded reason listed by faculty was “distance/time” (18.3%). Respondent choices which fell into the “Other” category displayed a wide variety of answers, including indications of “inevitability,” “go with the flow,” “important, but not to me.” The lowest rated reasons given for the importance or lack of importance of Web-based instruction in teacher education was “institutional support” indicated by less than 2.2% of the respondents.
### Table 13

**Reasons for Selection of Level of Importance of Web-based Courses in Teacher Education**

<table>
<thead>
<tr>
<th>Reason</th>
<th>Very Unimportant</th>
<th>Unimportant</th>
<th>Important</th>
<th>Very Important</th>
<th>Total Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other – non-coded</td>
<td>2</td>
<td>1</td>
<td>6</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Distance/Time</td>
<td></td>
<td></td>
<td>2</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Discussion/interaction</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Model technology use</td>
<td>1</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Variety/alternative offerings</td>
<td></td>
<td></td>
<td>2</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Course content</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Hybrid/combination</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct contact</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Model teaching/observation</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Institutional support</td>
<td></td>
<td></td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>No reason given</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Total Responses</td>
<td>2</td>
<td>5</td>
<td>11</td>
<td>18</td>
<td>23</td>
</tr>
</tbody>
</table>

*Note.* Total may not equal 100% as a result of rounding.

Four respondents did not rate a level of importance.

24% did not give a narrative reason.

a “Other” responses included reasons specific to an individuals or very general in nature, such as “Don’t like it,” “Communication skills,” and “Convenience for student.”
Chapter 5

Summary, Conclusions, Discussion, and Recommendations

This chapter will offer a summary of the study followed by conclusions and discussion of the research data drawn from the results of the survey questions.

Summary of the Study

This study developed from earlier research on the objections, problems, or barriers to the use of distance learning during the academic preparation of teachers. Earlier studies revealed technical problems that centered on the perceived reliability or unreliability of hardware components or software available to instructors. Hardware and software that was not user friendly could create problems affecting the successful delivery of course materials.

There were also non-technical problems centering on professional objections to online courses. Job security, intellectual property rights, course control, and the constant requirement to learn or maintain new skills were listed as concerns by faculty. Even when accepted, Web-based courses required a training period for faculty consistent with their existing schedule. Faculty members were expected to master a complex array of technical skills and subject matter expertise resting on the availability of structured support systems (Schmidt, 1995). The existence of a structured tutorial system with effective technical support would appear to eliminate many of the reasons cited by faculty members for failure to offer online courses (Nasseh, 1999). It would seem reasonable to expect a wider use of Web-based courses in an environment where such a structure exists.
The teacher education programs found within the State University of New York were selected as the focus of this study due to the availability of a structured resource for faculty seeking to develop and present online courses to their students. Yet, only five of 16 schools of education in the 2000-2001 academic year offered courses via the structured system available to faculty (SUNY Learning Network, 2002). At least 1,680 postsecondary education institutions in the United States offered distance education programs during the period 1997 to 1998. Acceptance by schools of education within this group offering such programs was limited. Only 19% of those courses offered by schools of education at the undergraduate level were offered via distance, while 40% of education courses (in schools of education) were offered at the graduate level via distance education.

Purpose of the Study

The purpose of this study was to identify factors that influence the adoption of online courses by SUNY faculty members engaged in professional development and preparation of teachers. The availability of personal computers now allows course material to be offered online with potential applications for programs designed to prepare professional teachers. There are also professional forces creating new education forums. Teachers in the 21st century classroom are expected to meet higher standards, master the intricacies of computer-supported curricula, and effectively use Web-based research or communications resources for their professional and curriculum development.

Review of Methodology

A survey instrument was designed and submitted to faculty members from the State University of New York (SUNY) campuses’ schools of education, colleges of education, or
teacher education programs. A survey instrument containing 58 items was developed and sent to a random sample of teacher education faculty from the SUNY system. Since the selection of participants was random, it included those who have no experience delivering online Web-based distance education as well as those who have had such experience.

Data Collection

A survey packet including a cover letter (see Appendix C), survey instrument (see Appendix D), and a self-addressed, stamped envelope was mailed to 275 State University of New York faculty involved in teacher education. The total number who responded was 178. Returns were recorded by coded number and after the second week a reminder letter and questionnaire were mailed to non-respondents. At the conclusion of the time period for the second mailing, a postcard reminder was mailed to non-respondents. These subsequent mailings produced 65 additional responses for an overall response rate of 62%. Follow-up of non-respondents was conducted by telephone interviews involving 10% of the 105 non-respondents.

Findings and Conclusions

Research Question One: What factors influence SUNY faculty members’ decisions to develop and implement online courses?

This study found that any decision to offer online distance education continues to be complicated by a number of related factors. Many of the faculty at SUNY schools of education who responded to this study indicated they would consider several factors in their decisions to implement online courses for pre-service teachers. Many felt that the time required in the development or revision of online material combined with concerns over the level of technical support offered by their institutions needed to be considered carefully. Respondents ranked the nature of course content as one of the most influential pedagogical factors that needed to be
considered in any implementation decision, but responses also suggested additional concerns for professional issues such as the additional work load that online courses potentially require. Despite these misgivings, many of the respondents viewed Web-based teaching as important or very important.

*Research Question Two: What are SUNY faculty member’s primary concerns regarding teaching of education courses online?*

Respondents generally believed that Web-based teaching was important or very important in teacher education but are put off by technical (the need for technical support when using equipment, devices, hardware, software that deliver online material) and academic (appropriateness of content, discussion quality and content) concerns. Online course development, even if the content is deemed suitable, requires an investment of time and effort to learn new skills required by a relatively new communications medium (Web-mediated and computer-based). SUNY SCDE faculty are also concerned about potential for an increase in work without either support from the institution or compensation, and unclear distance education policies. They are also concerned about the general quality of online courses.

*Research Question Three: To what extent are SUNY faculty’s concerns about online courses related to their: years of teaching, content area affiliation, current position, academic degree, and, tenure status?*

*Institutional Issues. As the faculty member’s years of teaching, rank and highest degree increased, their agreement with their concern that there is a lack of clear institutional policy with online teaching increased. As faculty rank, tenure and highest degree increased, their agreement that the institutions lack incentives to teach online also increased. Faculty members irregardless*
of rank, years of teaching, tenure or highest degree, agreed with the issue that online courses and classroom courses are given the same weight in terms of faculty load.

**Technical Issues.** As faculty rank increased, faculty members tended to agree more with the technical issues presented to them. The faculty members agreed that online learning is difficult without proper training, that adequate support systems are a major concern, faculty lack technical knowledge, and that online technology limits the use of demonstration.

**Faculty-centered Issues.** The level of agreement concerning online courses lacking cohesion or sense of community increased as the faculty member’s years of experience and rank increased. As faculty member’s highest degree increased, they tended to agree with issues of control of intellectual property, and discussion content and quality being better online.

**Research Question Four:** How do the findings of this study compare to those of previous studies regarding the institutional, technical, and faculty-centered issues that affect the development and implementation of online courses?

These findings parallel those from previous research: concerns over the quality of online courses (as demonstrated in the level of student-teacher or student-student interaction), the absolute necessity for training in the use of online equipment, the need for technical support, and the suitability (or lack of suitability) of course content for an online environment.

**Research Question Five:** In what ways do SUNY faculty who have taught online and those who have not differ in demographics, concerns and agreement with related issues?

Faculty experienced in online delivery of instruction and those not experienced appeared relatively homogenous in terms of demographics. The largest percentage of each group are tenured with over 20 years of teaching experience, and hold the rank of associate professor.
Experienced faculty members indicated agreement that classroom based courses and online courses are given the same weight in terms of faculty load, although they acknowledge the time commitment is greater for online class preparation. These same faculty members do not agree that online students perform as well as those in a traditional face-to-face classroom; however, they are in agreement that discussion content and quality are better in the online class. Without having experienced the Web as a delivery platform for courses, the inexperienced faculty expressed disagreement that these courses are given the same faculty load weight or that the time commitment is greater. They indicated disagreement that discussion is better online; and they strongly disagreed that students in each of these delivery platforms perform as well.

Research Question Six: What are the primary reasons SUNY faculty decide not to teach online?

Approximately 31% of the faculty surveyed would not use online technology to deliver teacher education courses, with another 10% stating they are unsure whether or not they would. Of those completing the narrative question asking them to identify reasons for their selections, a quarter of the responding faculty stated that they felt the course content was not suitable to online delivery. Concern was also indicated that discussion and collaboration were missing from such courses without the face-to-face or personal contact. Teacher education was felt by many faculty to be a “modeling” experience in which students model their instructors; likewise students demonstrate their own skills within a classroom setting. The collegiality of interaction is a necessary component of teaching as a profession.

Research Question Seven: How important do SUNY faculty believe Web-based teaching is in teacher education?

In many cases, despite negative or uncertain feelings toward the delivery of courses via the Web, over 70% of the faculty indicated that this format of teaching is important in teacher
education. Distance and time factors have become crucial to many potential students in the decision to attend college. These factors are even more crucial to in-service professionals seeking re-certification and/or advanced degrees. Faculty, however, do not want to be required to teach this way; nor do they believe, on a personal level, that they could be as effective in terms of teaching. A more positive attitude was discovered for the possibility of “hybrid” courses. These hybrid courses can be divided into segments delivered via the Web with some classroom based instruction or laboratory time.

Based on these findings, it is possible to conclude that responding faculty members expressed attitudes and expectations toward the development and presentation of online courses to pre-service teacher education students that parallel similar responses in earlier studies of distance education in general.

Review and Discussion of Findings

Distance education in some form has existed for many years but it is only in the last five to ten years that computer-centered communications have developed to the extent that online asynchronous classes can be offered in any large number. Prior research interest centered on developmental issues such as the delivery of courses designed to teach faculty computer skills or how to use computers in the K-12 classroom. Others conducted research to determine the impact of distance education on learning itself, while additional research addressed the appropriate mechanisms needed to encourage teachers to be proficient in the use of computers to support classroom activities.

This study sought to explore the development and use of online technology to deliver course material specifically to students at schools of education in a single (although large) university system. The focus on distance education (delivered via online assets) to pre-service
teacher education students provided data that was unique to a particular academic setting as opposed to more generalized studies of online distance education offerings at higher education facilities. In one respect, the paucity of research (and actual experience) dealing with the use of online technology to deliver courses to pre-service teachers should not be surprising given the limited number of actual courses offered at SCDEs. SUNY respondents to this survey are experienced educators with senior-level academic credentials and rank. Few actually had experience teaching online, yet most were aware of the importance of online delivery systems, the potential it offers, and Web-based resources used to supplement traditional classroom-based courses. Teacher education faculty responding to this study described the education of pre-service teachers in terms of interaction rather than transmitting a set of facts. They supervised students in a classroom setting and taught by either example or in response to observable student actions in the classroom.

Even as they expressed interest in using online tools, respondents were uncomfortable with the complexity and uncertainty of the steps required to develop and implement Web-based instruction. Any decision to instruct online is affected by a need for training in the use of such computer equipment, support systems, and specific technical knowledge.

The technical obstacles to online education may be alleviated by rapid developments in the communications capabilities of new computer models with teleconferencing hardware and software. Issues such as student-student or faculty-student interaction may become a non-issue if all participants in a class can hear, view, and interact with others despite the distances involved. Other obstacles remain formidable. It is not easy to allocate time to learn new application programs or the use of equipment when other demands faced by college faculty members require attention. Even if these barriers can be lowered or eliminated, other issues remain. Do students
actually learn online? Is there a unique online teaching methodology and, if so, do our schools of education prepare future teachers to instruct in the online environment?

Recommendations for Practice and Future Research

Responses to research questions one through seven suggest a number of professional concerns. Faculty at SUNY schools of education voiced acceptance of online courses as a tool in teacher preparation, but expressed reservations about specific areas. The following recommendations for practice and future research are based on these findings.

Recommendations for Practice

1. Institutions seeking to implement online courses as a part of the teacher education program of study should entice faculty to develop such courses by offering an incentive plan. Incentives could be in the form of equipment, monetary rewards, release time, etc.

2. Institutions should re-evaluate the weight of online courses in comparison to classroom-based courses. Faculty have indicated that preparation and delivery time are greater for online courses, although they both are given the same weight for faculty load.

3. Adequate support system should be available during the development stages of online courses. Faculty require assistance not only with the technical aspects of course development but also with instructional design principles and practices.

4. If online teaching represents a completely new educational delivery system, it is possible that specialized preparation for teachers in this environment should be developed. Formal courses should be introduced into teacher preparation curricula to prepare pre-service teachers (at the secondary or post-secondary level) to instruct online.

Recommendations for Future Research
1. Future studies should be conducted to determine the specific skills that are required to teach online or to determine if online teaching requires new methodologies.

2. Studies should be undertaken that explore the effectiveness of existing support services for online course preparation (including studies of current release time programs).

3. Additional studies into the effectiveness of pedagogical styles associated with online teaching should be conducted.

4. A comparison of the effectiveness of online courses and classroom-based courses should continue to be studied, focusing specifically on learning outcomes. Online education will never be completely accepted in the higher education community until considerable evidence of the efficacy of courses offered in this setting is provided.

5. Analysis should be conducted as to why more graduate level teacher education courses are offered online as compared to undergraduate courses. This analysis may possibly explore the appropriateness of course content in graduate versus undergraduate courses. Faculty appear to feel that course content is a vital issue in the decision to offer their courses online. Is this feeling restricted in any way to the delineation of graduate and undergraduate courses?
References


*Dissertation Abstracts International, 63(01), 04A.*


DEC_1999/ dl.htm


050523a/$FILE/SUNY%20Learning.pdf


Appendix A

CHART A1

SLN Growth in Campus participation


CHART A2

SUNY Learning Network Enrollments

State University of New York Campuses

State University of New York's 64 campuses are geographically dispersed and bring educational opportunity within commuting distance of virtually all New York citizens. SUNY campuses comprise the nation's most diverse system of public higher education.

**University Centers**
- Albany
- Binghamton
- Buffalo
- Stony Brook

**University Colleges**
- Brockport
- Buffalo State
- Cortland
- Empire State College
- Fredonia
- Geneseo
- New Paltz
- Old Westbury
- Oneonta
- Oswego
- Plattsburgh
- Potsdam
- Purchase

**Health Science Centers**
- Brooklyn
- Syracuse

**Colleges of Technology**
- University Colleges of Technology
  - Alfred
  - Canton
  - Cobleskill
  - Delhi
  - Morrisville

**Specialized Colleges**
- College of Technology at Farmingdale
- Maritime College
- College of Optometry
- Institute of Technology at Utica-Rome
- College of Environmental Science and Forestry

**Statutory Colleges**
- College of Ceramics at Alfred
- College of Agriculture and Life Sciences at Cornell
- School of Industrial and Labor Relations at Cornell
- College of Human Ecology at Cornell
- College of Veterinary Medicine at Cornell

**Community Colleges**
- Adirondack
- Broome
- Cayuga County
- Clinton
- Columbia-Greene
- Corning
- Dutchess
- Erie
- Fashion Institute of Technology
- Finger Lakes
- Fulton-Montgomery
- Geneseo
- Herkimer County
- Hudson Valley
- Jamestown
- Jefferson
- Mohawk Valley
- Monroe
- Nassau
- Niagara County
- North Country
- Onondaga
- Orange County
- Rockland
- Schenectady
- County
- Suffolk County
- Sullivan County
- Tompkins Cortland
- Ulster County
- Westchester
Dear Dr. ____________

You have been selected to participate in a timely and important study regarding faculty concerns in the use of online learning in the professional development and preparation of teachers. As a faculty member of the State University of New York, your opinions are valued and will add to a growing pool of knowledge. This study involves a random sample from all faculty members serving in teacher education; experience in online course delivery is NOT a prerequisite.

Your name was drawn in a random sample of all faculty and adjuncts representing 16 campuses of the State University of New York that offer teacher education programs. In order that the results accurately represent all education faculty members, it is very important that each questionnaire be completed and returned. Responding should take approximately 15-20 minutes of your time, but it will be critical to the success of the study. Please complete the questionnaire and submit it within one week.

You may be assured that your responses will remain completely confidential. The code number of this correspondence will enable me to check your name off the mailing list when the questionnaire is returned.

Your cooperation is greatly appreciated. Enclosed you will find a small token of my thanks for the time you spend responding to this survey.

Very truly yours,

Margaret Hill Martin
Assistant Professor

(New York State commemorative quarter)
Appendix D

CODE #

Issues in the Development and Implementation of Web-based Teacher Education Courses

This questionnaire is designed to identify the factors that affect the development and implementation of online classes in teacher education programs.

Your participation is appreciated and your CONFIDENTIALITY is assured.

Part I
Demographics

Directions: For the following demographic items, please place an X in the box next to the appropriate answer.

1. How many years of teaching experience do you have at the university/college level?
   - 1-5
   - 6-10
   - 11-15
   - 16-20
   - Over 20

2. Which of the following best describes your specialization area?
   - Agricultural Education
   - Art Education
   - Business Education
   - Elementary Education
   - Family & Consumer Sciences Education
   - Foreign Language Education
   - Health Education
   - Health Occupations Education
   - History/Social Studies Education
   - Literacy Education
   - Marketing Education
   - Mathematics Education
   - Music Education
   - Physical Education
   - Science Education
   - Special Education
   - Technology Education
   - Trade & Industrial Education
   - Other: (specify) ____________

3. What is your current faculty rank?
   - Adjunct
   - Instructor/Lecturer
   - Assistant Professor
   - Associate Professor
   - Professor
   - Other: (please specify) __________________________

4. Are you employed in a tenure track position?
   - Yes
   - No

5. Do you have tenure?
6. What is the highest academic degree you have earned?
   - [ ] Bachelors
   - [ ] Masters
   - [ ] Education Specialist/CAGS
   - [ ] Doctorate
   - [ ] Other (please specify): ________________________________

7. Have you ever taught a class delivered exclusively through the Web?
   - [ ] Yes
   - [ ] No

8. Which of these Web-based technologies have you used? (Please check all that apply)
   - [ ] SUNY Learning Network (SLN)
   - [ ] Blackboard®
   - [ ] WebCT®
   - [ ] Other: (please specify) ________________________________

9. How many different courses have you taught through the Web (not how many times)?
   - [ ] None
   - [ ] 1
   - [ ] 2
   - [ ] 3
   - [ ] More than 3

10. How many total semesters have you taught using the Web?
    - [ ] None
    - [ ] 1-3
    - [ ] 4-6
    - [ ] 7-9
    - [ ] 10 or more

11. In the future, will you use online technology to deliver instruction?
    - [ ] Yes
    - [ ] No

12. Please give two primary reasons why you plan to use (or not use) online technology to deliver instruction? __________________________________________________________
    __________________________________________________________
13-21 How much influence would each of the following technological factors have on whether you implement (or would implement) an online course in your teacher education area. 
Scale: 1=No Influence to 5=Very Influential

<table>
<thead>
<tr>
<th>Technological Factors</th>
<th>No Influence</th>
<th>Very Influential</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. Course development/revision time</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>14. Hardware/software availability</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>15. Technical support</td>
<td>1</td>
<td>2</td>
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<tr>
<td>16. Pace of technological change</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>17. Connectivity issues/problems</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>18. Reliability of technology</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>19. Privacy rights</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>20. Network security</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>21. Other: (specify) __________________</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

22. Which of the technological factors above would weigh most heavily were you deciding whether to develop and implement a Web-based course?

23-28 How much influence would each of the following pedagogical factors have on whether you implement (or would implement) an online course in your teacher education area. 
Scale: 1=No Influence to 5=Very Influential

<table>
<thead>
<tr>
<th>Pedagogical Factors</th>
<th>No Influence</th>
<th>Very Influential</th>
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</thead>
<tbody>
<tr>
<td>23. Nature of course content</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>24. Course objectives</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>25. Class discussion</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>26. Methods of evaluation and assessment</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
27. Depersonalization of instruction

28. Other: (specify) ____________________________

29. Which of the **pedagogical** factors above would weigh most heavily were you deciding whether to develop and implement a Web-based course?

<table>
<thead>
<tr>
<th>23</th>
<th>24</th>
<th>25</th>
<th>26</th>
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</table>

30-37 How much influence would each of the following **Faculty-centered** factors have on whether you implement (or would implement) an online course in your teacher education area. **Scale**: 1=No Influence to 5=Very Influential

<table>
<thead>
<tr>
<th>Faculty-centered Factors</th>
<th>No Influence</th>
<th>Very Influential</th>
</tr>
</thead>
<tbody>
<tr>
<td>30. Intellectual property ownership/rights</td>
<td>1  2  3  4  5</td>
<td></td>
</tr>
<tr>
<td>31. Control of curriculum</td>
<td>1  2  3  4  5</td>
<td></td>
</tr>
<tr>
<td>32. Promotion and tenure</td>
<td>1  2  3  4  5</td>
<td></td>
</tr>
<tr>
<td>33. Institutional reward system</td>
<td>1  2  3  4  5</td>
<td></td>
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<tr>
<td>34. Annual performance review</td>
<td>1  2  3  4  5</td>
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<tr>
<td>35. Level of administrative support</td>
<td>1  2  3  4  5</td>
<td></td>
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<tr>
<td>36. Faculty load</td>
<td>1  2  3  4  5</td>
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<tr>
<td>37. Other: (specify) ____________________</td>
<td>1  2  3  4  5</td>
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38. Which of the **Faculty-centered** factors above would weigh most heavily were you deciding whether to develop and implement a Web-based course?

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<tr>
<th>30</th>
<th>31</th>
<th>32</th>
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<th>34</th>
<th>35</th>
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</table>
NOTE: Online teaching experience is NOT required to answer the following.

39-56 Directions: Indicate your level of agreement with each of the previously reported research findings, using the following scale.

<table>
<thead>
<tr>
<th>No Basis for Knowing</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

### Institutional Issues (your institution)

<table>
<thead>
<tr>
<th>39. Lack of clear institutional policies on the use of online technology affects its adoption by faculty.</th>
<th>NB SD D A SA</th>
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<table>
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<tr>
<th>40. Lack of incentives for teaching classes online is an obstacle to delivery of online instruction.</th>
<th>NB SD D A SA</th>
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<thead>
<tr>
<th>41. Classroom based courses and online courses are given the same weight in terms of faculty load.</th>
<th>NB SD D A SA</th>
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### Technical Issues

<table>
<thead>
<tr>
<th>42. Lack of adequate information about online learning technology affects its use by some faculty.</th>
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<tr>
<th>43. Online learning technology is difficult to use without the proper training.</th>
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<tr>
<th>44. Problems with equipment are a major concern to faculty in delivering courses online.</th>
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<table>
<thead>
<tr>
<th>45. Adequate support systems are a major concern to faculty in delivering courses online.</th>
<th>NB SD D A SA</th>
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<table>
<thead>
<tr>
<th>46. Faculty lack the technical knowledge to handle online learning technology and equipment.</th>
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<tr>
<th>47. Online technology limits the use of demonstration.</th>
<th>NB SD D A SA</th>
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### Faculty-centered Issues

<table>
<thead>
<tr>
<th>48. Faculty time commitment is greater for online class preparation, delivery and revision.</th>
<th>NB SD D A SA</th>
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<thead>
<tr>
<th>49. A faculty member does NOT have complete control of his/her intellectual property with online courses.</th>
<th>NB SD D A SA</th>
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<tr>
<th>50. Online delivery of instruction is at least as effective as teaching students face-to-face.</th>
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<tr>
<th>51. Online teaching lacks cohesion or sense of community.</th>
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<tr>
<th>52. Web-based delivery is not appropriate for all courses.</th>
<th>NB SD D A SA</th>
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<tr>
<th>53. Discussion content and quality are better in the online class.</th>
<th>NB SD D A SA</th>
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<tr>
<th>54. Cheating in an online course is a common threat to the quality of online courses.</th>
<th>NB SD D A SA</th>
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</table>
55. Students taught online perform at least as well as those taught in a traditional face-to-face classroom.

56. Teacher-student interaction is difficult when using online technology to deliver instruction.

57. How important is it to offer Web-based teacher education courses?

Very Unimportant Unimportant Important Very Important

58. Please explain the reason for your selection in #57

Would you like to receive a copy of the results of this study?  Yes  No
Appendix E

MEMORANDUM

DATE: April 4, 2002

TO: Margaret Martin
OSWEGO University
Dept of Voc. Teacher Prep.
307 Park Hill
Oswego, NY 13126

FROM: David M. Moore

SUBJECT: IRB EXEMPTION APPROVAL – “Factors Influencing Adoption of Web-based Courses in Teacher Education (Dissertation)” – IRB # 02-210

I have reviewed your request to the IRB for exemption for the above referenced project. I concur that the research falls within the exempt status. Approval is granted effective as of April 4, 2002.

cc: File
Departmental Reviewer: Jan Nespor T & L 0313

Virginia Tech
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

Institutional Review Board
Dr. David M. Moore
IRB (Human Subjects) Chair
Assistant Vice President for Research-Compliance
CVM Suite II - 310 Academic Commons
Blacksburg, VA 24061-6442
Office: 540/231-9091; FAX: 540/231-9097
e-mail: moomo@vt.edu

A Land-Grant University—the Commonwealth is Our Campus
An Equal Opportunity/Affirmative Action Institution
Appendix F

OSWEGO STATE UNIVERSITY
HUMAN SUBJECTS EXPEDITED REVIEW FORM

TO: Peggy Martin

FROM: Stephen A. Wurst, Ph.D., Chair, Human Subjects Committee

RE: Research proposal: Factors Influencing Faculty Adoption of Innovative Courses in Teacher Ed. Programs in SUNY

Your above titled research project has been received for expedited review and:

[ ] has been approved         [ ] needs further revision (see below).

Keep this page for your records, but please complete the attached form titled "Acceptance of Review by Principle Investigator" and return it to Dr. Wurst (465 Mahar Hall) prior to conducting the research.

Thank you.

Signature: ____________________________ Date: 4/9/87

Further Comments:

____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
Appendix G

Reasons Why Faculty Plan or Do Not Plan to Use Online Technology to Deliver Instruction

Do Not

- I supervise student teachers and only use email to communication and answer questions.
- May not because: not much support (financial, time, technical) is available and students have poor skills.
- Have always taught laboratory courses that involved equipment most students would not have access to unless they were in the laboratory.
- The seminar course I teach is a topic and problems course taken while student teaching. Students need to be together when the course meets to share experiences
- As a retired public school classroom teacher, I do not see myself into this type of teaching environment in the future. At present I supervise student teachers in Technology on a part time basis.
- I don't have the technology skills. I share many classroom materials and engage in numerous collaborative activities which do not led themselves to online delivery.
- I don't like it. It dehumanizes students.
- Interaction important to build and develop meaning and professional relationships and practice of total communication skills.
- Web based instruction limits communication channels to one only -- not really appropriate to help pre-service and working teachers develop interpersonal skills needed in K-12 classrooms.
- First of all, computers, Internet, etc. are not examples of technology. Technology is a process. What you are referring to are tools and equipment. Unfortunately education continues to harmfully refer to computers, networks, software, and peripherals as technology. Secondly, several centuries of pedagogical development and a lack of any true research demonstrating positive attributes of electronic learning tools will continue to prevent me from using online instruction process.
• Does not suit courses for delivery. Do not believe online tech. best learning situation for
delivery. Philosophically believe need combination of fact-to-face and technology are
better modes.
• Not part of my teaching responsibilities. Not seen as a need.
• I work in the field with interns; seldom on campus. My instruction is mostly
individualized and supervisory.
• I am retiring, plus I try to use e-mail with students and it fails miserably.
• The opportunity hasn't presented itself … lack of staff development.
• Total lack of student interaction. Loss of the benefit of class discussion.
• Seems like it makes too much work -- I'd have to learn first, plus communicating with
students is easier in speech than in writing. Is it worth the trouble? I'm not sure.
• Face-to-face interaction with class would be absent. Concerns about being chained to the
computer - time.
• Lack of time currently, no time for training. Would like to already have knowledge—it
would make life more simple in a way—but more demanding too. (I know, I’m off topic)
• The place I’d deliver to has outdated or no technology—students do not have access at
their homes or schools.
• I have participated in interactive televised courses, but the courses I teach require social
interaction. I could not teach as I teach on the web.
• I don't deliver instruction. I use the web to facilitate communications, discussion, sharing
& critiquing writing, doing joint projects.
• As a supervisor of student teachers, I need to have direct personal contact with my
students to effectively monitor and evaluate their teaching strategy.
• My courses are hands-on science courses; you have to be there.
• I observe student teachers in the classroom and teach seminars.
• No time / training available. Not espoused strongly at my university
• Human interaction crucial to my teaching goals.
• Part-time faculty constraints--I work another 40 hr/wk job and do not have home access
to the web.
• I supervise student teachers thus inappropriate methodology
• Does not fit well in program—need to have real time visits to [schools], etc. Not convenient for my students.
• The delivery of my instruction is student friendly, cooperative and fosters deep rooted discussions. I have taken on-line courses in the past and didn’t receive the feedback I believe was necessary to enhance learning.
• I do not have training.
• My job is almost 100% field work.
• Lack of knowledge. Lack of availability/materials/technology
• I think face to face interaction with students is of great importance. I think students need to interact with each other (as well as their professor) in learning situations.
• Not interested.
• Low interest level.
• Part of my teaching is the relationship one develops with students. I don’t see this being possible through Web-based classes.
• Not easily available. Not particularly effective for the courses I teach.
• Course does not lend itself to that modality. Too interactive. Sounds boring.
• Courses include supervised school experience; need to be here. Lack of interest
• My primary responsibility involves assisting students in designing and delivering lessons and then supervising them during a preliminary student teaching experience (5 weeks in length).
• Time involved outside of class to read & respond to email. Group process & hands-on learning challenges.
• It is not offered at this college.
• I like to interact with students to read body language, etc. I do use e-mail w/students--if they have questions, but in general I don't use it, but then again--I do refer/assign sites for students to view.
• The nature of my course requires group interaction w/hands-on learning experiences.
• In my field online technology cannot substitute face-to-face teaching.

Maybe/Don’t Know
• Not convinced of positive impact on student learning. Need research documented evidence. Time to start using it.

• I assume it will become necessary. I like technology.

• Lack of experience. I prefer classroom activities and interactions--although I'm open to learning about how I might incorporate online inst. as a part of my course. I am not interesting in teaching course completely online.

• My course is a hands-on course and does not lend itself to online delivery.

• The reason I have not so far is because I have not had the time to schedule the training since I work full-time as an ES reading teacher in addition to teaching as an adjunct.

• It would depend on the course I am teaching and if it lends itself to being delivered in such a manner. The ones I currently teach do not.

• Save Xerox costs. Easier access to class materials

• Would like to try some online delivery just not sure which computer to use (home and work).

• Perhaps to support outside of class discussion.

• I believe learning is developed through students & student/teacher’s interactions. Instructor/teacher should listen to students’ voices, which is better accomplished onsite.

• I prefer direct interaction with students. I like computers as side tool.

• If offered to me.

Do

• To enhance and support students' computer literacy To make course more accessible to students (I only teacher graduate courses online).

• Helpful for students using computers at home. Enhances instruction in general.

• Courses to be taught are being set up on Blackboard.com. Also for my own professional development, I want to make better use of the technology available.

• To help students.

• We must, to reach our student. It is cost effective.
• Plan to become involved with distance learning. Want to create options for students.

• Save time/paper

• It is the primary mode of communication. Allows course flexibility and use of current research based practice.

• Convenience, flexible instruction, insures student use of technology.

• I believe on-line asynchronous courses are going to be popular and offered more in the future. To be competitive colleges and instructors will need to be able to use the technology.

• Wave of the future. Meeting needs of students in different locals

• Ability to reach wider geographic areas. Ability to communicate w/students in a more timely fashion.

• Learners are at a distance. Promotes self-directed learning.

• Access by students who may not be able to attend on-campus course.

• Advances in technology make it more useful for some literacy classes.

• At the moment it is a time constraint--since a web course takes more time to begin.

• Valuable tool, model use for teachers.

• Because it is a growing, needed approach. Because I’m intrigued.

• So many resources, so many possibilities to provide authentic material are reasons in favor of use. However, technology is not necessarily the best way to teach all material to all students. Technology should not be the driving force; the nature of the material and the learners, the efficacy of various methods should be considered.

• I am willing to try to teach through the Web. However, I have some hesitation due to some unanswered questions: How can instructors control the testing through the Web? In other words, how do you know that the student not his/her grandfather is taking the test on the other side?

• Convenience and flexibility.
• Plan to use web technology to increase student contact outside of class—students live too far from each other for easy group work. Also, to make common resources available more easily, to a rural population.

• To offer courses at a distance—get new audiences. Students expect to use technology for learning: Need to accommodate them.

• Better immediate resources. Model how students should use it

• As a central info. "plaza" where I can go to get assignments, ask me questions directly or engage in extended discussion.

• I believe that the demand for and access to such classes will increase.

• Not readily accessible to adjuncts. Would be willing to try with tech. support.

• Improved instruction. Eventually will save time (I hope)

• I presently post assignments and offer self-assessments on line as features of a classroom course.

• When it is shown to be more effective. When the data show comparable learning achievement

• Ease of use for me and students. Disseminate greater quantity of information

• It offers a different delivery for the students. Allows the use of out-of-class time so that I can include more course content.

• I would like to -- not sure how to go about it with kinds of course I teach that usually require a practicum. I think it would be labor intensive at first. I like the fact that the course could reach more students. I'd like to be more technologically savvy.

• Student convenience, overcoming discontinuities, e.g. snow days, ease of access to materials.

• I will use Blackboard in hybrid courses, for enhancement. Asynchronous learning cannot be duplicated face-to-face.

• I wish I could but I may need some training to be well prepared for the task.

• Fosters sense of community. Extends the time students think about course topics

• Resources available, model best practice
• I love the level of intimacy and engagement with material my students and I achieve. I love the challenge of creating new learning spells and activities.

• Can achieve more in same time period. Can reach outside the normal catchment area--distance learning.

• Can reach other campuses to prepare for transfer to here. Can reach wider audience.

• I plan on using technology, just need the time to learn how to use the technology.

• Easy access to information and current trends. Ease in locating information.

• Flexibility.

• Interactivity.

• Convenience.

• Effectiveness.

• I find Blackboard a useful supplement to my regular classes—but it adds greatly to my workload so I have ambivalent feelings about it.

• Efficient & paperless (for me) way to disseminate handouts and other info. Planning to teach a distance course next year (interactive broadcast), & the BlackBoard site will be an invaluable support.

• Convenient way to organize for instruction. Very useful to have “back-up” courses on the web for students traveling from the “snowbelt.” Some students just can’t get to class.

• Students have easier access to course materials outside of class time. Added communication among students and teacher.

• More students may enroll in the course due to convenience (distance learning). Variety.

• It organizes class content and handouts so students can always go there to find what they’ve lost or missed. It allows me to get a sense of students who are quieter during class discussions.

• Reach students at distance from campus over summer session Flexible for teaching time.

• For ease of students in advanced (graduate) [reading] courses only.

• If the opportunity is available. Mature grad learners not need to physically be present in class for all sessions.
The Center plans to make its professional development program(s) Web-based. Web-based materials offer greater flexibility & access.

I post readings & discussions the students can see each other’s work & [react]

The web offers a wide variety of information & services. The use of the web is the wave of the future.

I see it has tremendous potential to facilitate communication between faculty & students. Greater access to more resources. I need to be a model to my students.

1) To teach technology
2) To keep students updated

1) Expanded audience
2) Lesson can be replayed if student is absent

One more way to reach students.

1) To supplement classroom delivery
2) To allow students access to course material 24x7

1) Access
2) Ease

1) Less paper
2) Easier access to students

It could provide another methodology to investigate in conjunction with questions probing the extent to which it can augment traditional methods and to what extent it affects the quality and quantity of student learning and teaching efficiency.

Possibility to extend discussions beyond the classroom walls. Convenience to my students & me.

1) Ready access for students
2) Save paper - duplication
3) Easily updated content

Improves effectiveness
Convenient in some ways

It is a must; we can reach a wider audience.
• 1) Access to professor and students is easier
• 2) Course materials easily distributed
• 3) Class “discussions” are recorded for assessment of participation and learning

• 1) Facility
• 2) Accessibility for students

• 1) Grad student population – employed & adult
• 2) Broader reach regardless of weather
Appendix H

Reasons Why Faculty Consider Offering Web-based Teacher Education Courses Important or Unimportant

58. Please explain the reason for your selection in #57 (How important is it to offer Web-based teacher education courses?):

Very Important

- Computer literacy is becoming a major skill required in our society. As teacher educators, we need to ensure that our students are computer literate AND that they can model this literacy to facilitate their students' (k-12) computer literacy. Also, a practical reason to offering Web-based courses is to stay competitive. That is, if a college does not, students will eventually turn to colleges that do offer this alternative. $$

- As demands on student time increase (non-trad, family, jobs, hobbies, etc.) and faculty are expected to do more (collaborating, research, grants, etc.) the online environment offers a way to manage time (the most precious commodity).

- Grad learners have jobs—many full time.

- Flexible schedules for class work rather than attending a class at a set time is very important to learners.

- We need to use technology in a demonstration of role modeling and professional practice if we expect our grad. Teachers and (teachers to be) to use this approach with their students in their classrooms.

- Educational institutions need to offer more options for people seeking higher education. People schedules—family and work—vary. The demands on their life, time & resources vary. Colleges need alternate ways of meeting peoples needs. Many cannot spend time in class in traditional settings.

- Consistent with the modern world.

- It’s important that faculty be as “savvy” about uses of technology as our students.

- On-line courses allow all students to have a voice, as well as extended contact with each other and the teacher.
On-line courses encourage more collaboration in learning and a better balance of “power.”
  - provides much more access to more students
  - fits with mandatory M.S. in NYS
  - is a venue for developing strong and powerful communities of learners
  - provides unparalleled networking opportunities for students
  - fits well with complex work/family lives of many teachers

Students have very busy lives and attending school is just one of these facets. They need to have more ways to access their education.

Web-based instruction needs to be balanced with face to face contact … however, WBI will continue to gain in popularity as an asynchronous method of instruction.

The future of education involves all endeavors!

Like it or not, the world is moving to an Internet economy and education will be a part of it. Colleges and universities will need to offer classes on-line for matriculated students as they will not be competitive.

To get teachers more familiar with and comfortable with technology in education.

Professional certification options for teachers employed in remote areas.

We are in a technology age! We need to offer many alternatives. Many courses could be handled well in this manner, many could utilize a combination approach. This gives students more options--many of our students travel 1-1½ hrs. to take courses. This would help them.

Expansion of course offerings in a rural area.

I feel that hybrid courses offer the best of both worlds.

It will make more courses available over a wider geographical area. Travel and related problems would be minimized while the number of students wishing to take a particular course would be greater.

Students spread over a wide geographic area.

As we reach out to more diverse populations, colleges must find practical ways to serve urban, suburban, and rural areas outside their immediate geographic areas.
Important

- Many people are limited in time and by distance factors (to attend classes in person). There is economic impact in traveling distance once or twice a week after working all day. Physically, web based is much less of a problem.

- Important because the web is a good delivery system and sharing system for many projects. However, I currently favor course that are part face to face and part web. I am open to being convinced that a total web course is effective, but I need more experience. I have seen some lousy web material that is low-level memorization and I don't like it. It is more work to run a web course and I feel overloaded as it is. I need more tech support also. Provide time, money, tech support and I will do it.

- Instruction of this type is the coming wave. Move with the surf or stand with low tide.

- New teachers are required to have a Masters degree to retain their certification. This can be difficult to do while working full time. We need to make this readily available. I feel there needs to be discussion groups set up to augment the online course. This idea sharing is very important. Some of the most valuable grad courses I have taken were video courses, but what greatly improved their value was the student group I was part of to complete the course.

- I believe it is important in order to stay competitive with other institutions. With many adult learners at the graduate level working full-time while pursuing a Masters degree in education, web based instruction provides convenient times and locations for them.

- It shows teachers how technology can be used in instruction.

- Essential to consider how to adopt and use for perhaps parts of courses--use it for what is appropriate: 1) delivery of information (lecture), 2) limited responses to lecture or readings seem productive, 3) technology part of course experience but not total.

- Students are more consumer driven. They are looking for inexpensive and convenient education. There are only so many brick and mortar institutions that can survive on the traditional curriculum with traditional students.

- There needs to be a variety of instructional delivery to meet the needs of all students.

- We will need to explore options for making completion of certification requirements more user friendly as we struggle to put certified teachers in every classroom and as we work to keep teachers current in terms of content and pedagogy.

- This is the mode of information transfer and teachers must be competent and comfortable with technology to model for and instruct students in its use. Pre-service teachers must be
prepared for the schools as they exist and practicing teachers should have access to continuing professional development technology is a critical piece of both.

- Probably because of the changes occurring in the way teacher education is being 'assaulted' in numerous ways by privatization issues, alternative routes for teacher certification, entrance of numerous entities entering teacher education, etc. Teaching is a human being enterprise, yet few are willing to truly address the critical components of the profession and what it means. Would one go to a doctor educated on-line -- I don't think so -- but we as teacher educators are willing--far too willing--to ignore the critical human interactions necessary in the critical personal human aspects of education.

- On-line courses offer a variety of curriculum not possible by traditional instruction. Student paces their own progress within a given time-frame.

- Many courses can be taught very effectively, especially content-based courses. Schedules can be more flexible, travel-time reduced for commuting students, overcrowded classes eliminated. In the final steps of teacher-preparation, on-site observations, practicum, and supervised student teaching are essential, with limited uses for Web-based teaching.

- For most faculty members, extensive in-service support is crucial to taking best advantage of technological instruction.

- Students will need to use this or similar delivery in teaching children. Now is the best time to learn. Methods courses still require some direct (f 2 f) supervision. Many intro courses adapt well to online instruction.

- Ease of delivery for distant students, particularly grad students working as teachers.

- Involvement in discussion of shy students.

- I acknowledge that tech is important. . .the Web gives us access to things we don't have elsewhere. I acknowledge that tech can be an "equalizer." Still, its not a panacea & it’s a great time consumer--so unless I felt VERY supported (institutionally) I wouldn't venture in this direction. Also I'm really not sure I could accomplish the same kind of community building etc. online that I can in the flesh. . .

- It provides the opportunity for many students who may not be able to go to a campus to attend classes. These students include non-traditional students, homebound, and those without adequate transportation.

- The success of such delivery relies on a number of factors that I have responded to in this survey. This type of technology can be a positive addition with the proper support, time, and delivery services to the site locations. It has its' limitations.

- Many non-traditional students need the flexibility of Web-based instruction. Being the chief bread winner, more on-line course work would allow students to continue to work, cut down on travel and still maintain MORE of a family life.
• It will expand the availability of tch. ed. to people who are hampered by distance and other factors.

• The need for new teachers, especially in some Sec. Ed. areas. There are non-traditional students, currently employed in a variety of fields, who would prepare for a teaching career if it were easier to take courses according to their schedules.

• Web-based education will benefit people who cannot afford to attend classrooms for various reasons. I think the nature of subject materials should be seriously considered when deciding between Web-based instruction and classroom instruction.

• We all need to keep pace with technology—but we need to keep control of it. Right now and for the rest of my lifetime, I do not foresee teachers being removed for computers, so it’s not the highest thing on my list to offer Web-based courses.

• Administration needs to consider the difficulties of offering a good Web-based course, especially for those of us who were paper-trained! I think administrators statewide are jumping with both feet without considering all the issues, including resources.

  ■ Students need many options to obtain best education possible offering Web-based courses will provide teachers great new opportunities if done well.

• We and our students need to be able to work in a synchronous/asynchronous environment to meet future job demands. My concern lies in the need for teacher education to validate what our students know and can do, as well as their disparities for teaching as a career. At this time, I’m uncertain about how that can occur.

• Technology will be used in all future classrooms. We need to model to our students how effective it is so they will use it in their classroom.

• There is a need for this technology. Such courses enable student participation in geographically remote areas. I have experienced "rote" classes that were seemingly ineffective, other programs such as the physics courses offered through Montana, have a tremendous reputation.

• Some courses where content is the main focus and social interaction is not an essential for achieving learner outcome.

• Most courses I teach require group work and on-site work with children. Grad courses benefit from interactions among students. Only courses that lend themselves to individual study & reflection are appropriate for this medium. Education courses are process driven.
• It offers another model of service delivery for those who are working or may have transportation problems, childcare issues...
• Makes education available to a wider pool of people.

• The technology allows colleges to broaden their scope, increase access to student base and model innovative practices.

• It depends on the course. Some foundations courses might not be well served Web-based.

• A growing number of teacher prep. students are non-traditional & hold full time jobs and/or commute long distances. Many "students at a distance" could benefit from those on-line offerings.

• I think it's important to offer courses on-line -- it is easier for students to access on-line courses -- and some courses are great for on-line. However, I do not feel all courses could go to a Web-based format. I'm finding it difficult to think about translating the course I teach to a Web-based format.

• Web supported classes give options available in the classroom but give wider access. We need to draw more teachers and provide professional development. Web has its own useful properties when numbers are controlled and classroom has its properties.

• I think it's important to offer some on-line courses to accommodate the needs of students who live at a distance from the university. But I also think some courses -- particularly practicum courses -- can only be taught face-to-face.

• It may help students who are unable to attend school.

• For some students the ability to do a course on-line could alleviate childcare/time issues. Some courses may be suited for such instruction. I don't know much about it.

• As a person new to this "scene," I can only say we (SUNY) must:
  ■ remain technologically current
  ■ offer as many ways as possible for people to advance their education

• At least to make the teachers available; the benefits and advantages (merits of) of Web-based learning!

• It's popular at the moment--it is not going to be popular after people experience it.

• I still have some reservations about using/offering Web-based courses. I know it is convenient for students, but I also think they are missing the personal interaction from the instructor and their peers. Offering Web courses is something I need to give more thought.
• Web-based teacher education courses allows the flexibility for more course offerings and opportunities for students. A student with web based courses are provided an opportunity for more individualized instruction and learning.

• 1) Time
• 2) Opportunity
  ■ for reflection, instructional conversation that is rich, extensive

• Students should have opportunities to have courses from distances thus Web-based is a clear option.

• 1) It fills a need students have.
• 2) It fills a need school districts have.

• It is important to offer Web-based courses for those unable to attend or have convenient access to universities so they may receive certification or degrees to advance in their personal positions.

• Faculty have to show willingness to keep current with new technology and its applications. We expect this of our teachers, and we must expect it of ourselves.

• I’m told institutions have to offer these types of courses in order to compete for tuition dollars with other universities.

• I think it is important because it needs to be done well. If the colleges that are best prepared to offer excellent teacher education Web based courses choose not to do so, I fear that other organizations—those with less experience and concern for quality control will take over this niche.

• For the changing technology world in which we live we need to provide the online technology to obtain students in the program and to show them how online is useful in education field as well as other careers.

• Competition with media in general (movies, TV, power point)

• School districts are expecting new teachers to use technology in their classrooms. The college needs to offer Web-based courses, so pre-service teachers can experience technology at a Web-based level & complete assignments using technology.

• Change with the times—a teacher’s job is to communicate and the students communicate very well in the “fast lane” of technology. There’s a lot to be desired (and probably lost along the way) but...
• I think it is critical for teacher educators to use technology and access the web as one source of research information. I believe teachers learn by seeing the instructor model technology use and using it themselves. I am still hesitant to offer a totally on-line course that does not allow for human interaction. The content that I teach most often (curriculum and instruction) requires face-to-face interaction.

• Flexibility in times of teacher shortages & student demographics.

• Limitations with available programs in my area (AgEd) to students across NY/NE region.

• Need to have face to face opportunity with some time for these courses – ESP in Education!!

• It is all about access. I prefer “live” to current Blackboard. However with live interactive video from the whole class (not possible yet, of course) I would be much more satisfied with this kind of teaching.

• The main reason – I think – is to teach students how to use the Internet in their own teaching.

• For issues of equity, I believe some people may access higher education and belong to a learning community, who otherwise would not. I don’t think the online courses are pedagogically relevant but, again, may be a tool for equity. That is very important.

• I see it as a way to reach students particularly at the grad level, who have needs/issues that make traditional course enrollment problematic. Also in light of changing cert. Standards and deadlines, I think online courses will assist students in the timely completion of their degrees.

• It’s important, but not in my course. My course is a hands-on science course for elementary teachers. Hands-on courses should be taught hands-on. Fine for other non hands-on courses, though.

• I see Distance Learning classes as important especially for new teachers teaching in a rural area.

• Travel time is an important and very expensive issue when trying to pursue a grad. Degree.

• Because it offers another tool, another way to teach & learn.

• There is an increasing population of non-traditional students who wish to complete a degree part-time and are dispersed over a large geographic area.
• At the graduate level, many recent graduates are working on their master’s degree while teaching. Again, they are dispersed over a wide geographic area.

• Future teachers need tech expertise. This is one additional opportunity.

• Many of our T.Ed. students are non-traditional. Online access would make their lives easier.

• In a growing technological world, a variety of teaching genres is important.

• Web-based courses need to be a part of teacher preparation programs so that future teachers learn how to use technology and how it feels to be a student in a class where technology is used.

• If the instruction is of high quality, more students will have the opportunity to benefit from the experience. Let's face it. The Web is here to stay.

• Some older students or students who live far away from institution would find Web based classes a wonderful convenient option.

• Online courses can reach people who otherwise would have trouble getting to a traditional course, due to distance or disability. They may also be more comfortable for some non-traditional students who aren't sure about returning to formal education, for learners who like or need to learn at "odd hours," and for learners who have very strong linguistic intelligence. But they can be very challenging for those who don't have excellent linguistic intelligence, and miss the great strengths (or lack of) of people with strong social intelligence.

• We are in a new age--the information-digital age. We need to explore how this method can add value to our instruction or help other (students) who can not take courses at a site, be able to access our college. I believe we must explore the pros & cons & possibility.

• This makes course work accessible to some students that may otherwise not be able to attend on campus.

• I believe that Web-based courses offer us an additional avenue through which to deliver instruction. They can be particularly effective for continuing education and professional development courses.

• I can’t answer based on experience. However, the ability to offer courses to remote areas is extremely important. Some courses lend themselves to this very well. A course in research methods or cooperative ed., for example, others do not.

• Would make teacher education courses available to a broader range of students.
There doesn't appear to be compelling evidence to suggest that such courses are vital to the overall process of teacher preparation. Essentially the primary benefit is that pertaining to geographic factors rather than qualitative learning factors of students. One might be more inclined to support Web-based instruction as a means of augmenting direct forms of interaction in classrooms by students and faculty. The issue of body/kinesthetic communication that occurs between and among classroom members remains elusive with respect to quality and quantitative aspects of common and learning and teaching.

It dehumanizes something that should be human.

Maybe helps with commuters and increasing enrollments, however I am not convinced that this method of delivery is "better" than traditional methods. Need more research prior to getting on this bandwagon.

Sometimes we tend to follow fads and in the process we fail to account for quality.

I'm old fashioned enough to think we still need to watch teachers and know how they will react. I'm NOT an advocate of online teacher preparation.

I think it might be valuable to offer some parts of courses online but I think that so much of what teachers do is learned in interactions with others.

It is important, however, to consider the needs of students who cannot come to campus and to explore ways to meet their needs. Online inst. may play a part—but I think it's a serious mistake to over rely on this technology.

A Web-based course in pedagogy is not appropriate because it does not allow students opportunities to peer teach or enter into discussions that are critical to understanding and knowing how to teach science. Documented evidence of student attainment of educational learning standards requires a "regular" class setting for a class designed to enable students to become reflective teachers who promote scientific literacy in their own middle and high school science classrooms.

Teacher Education courses provide good example when college/staff model good instruction.

There are many schools of education across the state and many summer and intensive courses. The technology is not yet an adequate substitute for most content in teacher preparation.
• Teaching in a K-12 setting is a personal/face-to-face business. One cannot learn the intricacies of such an endeavor over the computer. The social construction of knowledge & personal interaction of a traditional classroom would be greatly missed.

• Web-based courses can make content more available to more people, teachers must learn, through practice, how to interact with a wide range of individuals. Web-based courses do not seem to be well suited for accomplishing this outcome.

• I believe it would be very difficult to do just to teacher education online. Human interaction is a critical component of teacher ed. This interaction is simplified too much online.

• Teachers will teach in classrooms with children. T.E. courses can and should serve as arenas of instruction that have within them the same issues that teachers will face in the classroom. Online courses totally circumvent the face-to-face realities of the classroom. New teachers then lose the opportunity to learn from a face-to-face educational experience.

• Few teacher ed. courses focus on the mastery of a clearly delineated body of information. Rather most teacher ed. courses involved learning how to think and act as a professional. On-line courses simply cannot evaluate how students act with others--e.g. how they question or respond to questions, how they express themselves in speech, how they monitor others reactions.

• I see no compelling reason for it, except for the convenience of students.

• Face-to-face interaction is necessary to stimulate higher order thinking & creativity in students. To address student attitude & motivation, personal interaction is necessary. Only content can be sufficiently presented in Web-based instruction. Wholestic learning is like chewing gum--you need to do it yourself to get the flavor--it is not a spectator sport.

• I feel our society has enough issues with communications. To train future educators (who currently need more skills in communication with students, parents & other professionals) via the de-personalized web will contribute to the problem.

• Its not about offering courses through the web in TE. Its about demonstrating best practice in technology integration. TE courses should use the web and communication technologies not be delivered through them.

• 1) The student/teacher interactive and instant reactions would not be there.
• 2) Possibly for those students that find it difficult to get out to classes online would be helpful.
• I think future teachers need contact with experienced classroom teachers not computers. An online program does not equate to a 25 year professional.

• SUNY is set up geographically to service the entire state, so by it’s design SUNY has already got coverage. Perhaps for courses or degrees that are not available locally WBI would be appropriate, but otherwise we are “competing with ourselves” so to speak.

• I didn’t [know] how to answer it. I honestly don’t know how important it is. My reaction? In terms of what?

• Based on my job responsibilities in the field.

• There may be circumstances under which Web-based instruction is appropriate, but I feel that the disadvantages outweigh the advantages overall

• I believe in face to face interactions in classroom settings.

• I believe that computer technology is part of the social trend towards alienation, further control by the medium & the programmed content, dysfunctional / violent social interaction, lack of modeling of civilized behavior (civil), including caring & concern.

• While math (perhaps) can use [computers] as support tool, I want students to react to each other’s nonverbal clues as well as the verbal ones.

• For education courses, we are always demonstrating & evaluating dispositions as well as knowledge. Body language , cooperative grouping, face-to-face social interactions are all crucial in superior teacher preparation.

• Importance lies in the message, not the medium.

• Web-based or bricks and mortar, the issue is ease of access for the student. If they want/need the course, they drive to campus. Web-based is a marketing convenience for the college. However, web enhanced instruction is very important for all classes as it opens up the class to the resources of the world, regardless of place & time. Discussions start in class and go on and on.

**Very Unimportant**

• Wave of future--on-line course delivery reflects other important technological shifts in society. How these courses are designed & implemented will have to improve based on the outcomes of Web-based courses offered over the past few years. Address problem areas & improve design.

• Face-to-face human interaction is essential for people preparing to be teachers.
• Teachers need to be skilled in interpersonal and group communication skills that require practice in face to face settings. Teacher education is not simply delivery & mastery of content but rather a complex set of related skills that take place within interactive settings. Such skills cannot be learned on-line.

• It puts quality faculty in fear of losing their jobs, or in not finding good tenure track positions to begin with.

• I do not believe Web-based instruction will ever seriously challenge traditionally-scheduled courses.

Neutral Answers

• I am very torn on this--we are espousing constructivist learning. Also I teach gender issues and other controversial topics. Not sure how to do this w/o face to face interaction, but it is coming whether we like it or not.

• 1) Web-based has new advantages that direct instruction doesn’t. Direct instruction had advantages Web-based doesn’t.
• 2) Web-based works for isolating students from each other physically, but a well designed course will include opportunities for student interaction.
• 3) Just DON’T MAKE IT MANDATORY.

• There would have to be a feasibility study in order to determine the need for Web-based teacher education--it is impossible to answer [question 57] without this info.
Appendix I

Demographics of Survey Respondents

Table I-1

Early and Late Respondents
N=275

<table>
<thead>
<tr>
<th></th>
<th>Total Respondents</th>
<th>No. of Usable Responses</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early</td>
<td>107</td>
<td>105</td>
<td>61.8</td>
</tr>
<tr>
<td>Late</td>
<td>71</td>
<td>65</td>
<td>38.2</td>
</tr>
<tr>
<td>Total</td>
<td>178</td>
<td>170^a</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Total may not equal 100% as a result of rounding.

^a Eight respondents did not complete the questionnaire because they were no longer involved in teacher education.

Table I-2

Years of Teaching

<table>
<thead>
<tr>
<th>Years of Teaching</th>
<th>No. of Respondents</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5</td>
<td>14</td>
<td>11.1</td>
</tr>
<tr>
<td>6-10</td>
<td>27</td>
<td>21.4</td>
</tr>
<tr>
<td>11-15</td>
<td>29</td>
<td>23.0</td>
</tr>
<tr>
<td>16-20</td>
<td>15</td>
<td>11.9</td>
</tr>
<tr>
<td>Over 20</td>
<td>41</td>
<td>32.5</td>
</tr>
<tr>
<td>Total Respondents</td>
<td>126^a</td>
<td></td>
</tr>
</tbody>
</table>

Note: Total may not equal 100% as a result of rounding.

^a Responses received through telephone interviews of non-respondents are included in the total figure.
Table I-3

*Respondents by Faculty Specialization*

<table>
<thead>
<tr>
<th>Rank</th>
<th>Content Area</th>
<th>No. of Respondents</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Elementary Education</td>
<td>25</td>
<td>19.8</td>
</tr>
<tr>
<td>2</td>
<td>Other *</td>
<td>21</td>
<td>16.7</td>
</tr>
<tr>
<td>3</td>
<td>Special Education</td>
<td>19</td>
<td>15.1</td>
</tr>
<tr>
<td>4</td>
<td>Literacy Education</td>
<td>16</td>
<td>12.7</td>
</tr>
<tr>
<td>5</td>
<td>Science Education</td>
<td>13</td>
<td>10.3</td>
</tr>
<tr>
<td>6.5</td>
<td>Technology Education</td>
<td>10</td>
<td>7.9</td>
</tr>
<tr>
<td>6.5</td>
<td>Mathematics Education</td>
<td>10</td>
<td>7.9</td>
</tr>
<tr>
<td>7</td>
<td>History/Social Studies Education</td>
<td>6</td>
<td>4.8</td>
</tr>
<tr>
<td>8</td>
<td>Foreign Language Education</td>
<td>4</td>
<td>3.2</td>
</tr>
<tr>
<td>9.5</td>
<td>Agriculture Education</td>
<td>1</td>
<td>.8</td>
</tr>
<tr>
<td>9.5</td>
<td>Family &amp; Consumer Sciences Education</td>
<td>1</td>
<td>.8</td>
</tr>
<tr>
<td></td>
<td><strong>Total Respondents</strong></td>
<td><strong>126</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Note: Total may not equal 100% as a result of rounding.

*a* "Other" responses included generic educational areas such as Curriculum and Instruction, Secondary Education, and Teacher Education.

*b* Responses received through telephone interviews of non-respondents are included in the total figure.
Table I-4

*Respondents by Faculty Rank*

<table>
<thead>
<tr>
<th>Rank</th>
<th>No. of Respondents</th>
<th>Percent</th>
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</thead>
<tbody>
<tr>
<td>Associate Professor</td>
<td>57</td>
<td>31.3</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>38</td>
<td>20.9</td>
</tr>
<tr>
<td>Professor</td>
<td>30</td>
<td>16.5</td>
</tr>
<tr>
<td><strong>Total Respondents</strong></td>
<td><strong>125</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Note: Total may not equal 100% as a result of rounding.

a "Other" responses included generic educational areas such as Curriculum and Instruction, Secondary Education, and Teacher Education.

b Responses received through telephone interviews of non-respondents are included in the total figure.
Table I-5

*Faculty Employed in Tenure Track Position*

<table>
<thead>
<tr>
<th>Tenure Track</th>
<th>No. of Respondents</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>116</td>
<td>92.8</td>
</tr>
<tr>
<td>No</td>
<td>9</td>
<td>7.2</td>
</tr>
<tr>
<td><strong>Total Respondents</strong></td>
<td><strong>125</strong>$^a$</td>
<td><strong>100.0</strong></td>
</tr>
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</table>

Note: Total may not equal 100% as a result of rounding.

$^a$ Responses received through telephone interviews of non-respondents are included in the total figure.

Table I-6

*Tenure Status*

<table>
<thead>
<tr>
<th>Tenure</th>
<th>No. of Respondents</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>85</td>
<td>68.0</td>
</tr>
<tr>
<td>No</td>
<td>40</td>
<td>32.0</td>
</tr>
<tr>
<td><strong>Total Respondents</strong></td>
<td><strong>125</strong>$^a$</td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Note: Total may not equal 100% as a result of rounding.

$^a$ Responses received through telephone interviews of non-respondents are included in the total figure.
Table I-7

*Highest Academic Degree Earned*

<table>
<thead>
<tr>
<th>Degree</th>
<th>No. of Responses</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masters</td>
<td>9</td>
<td>7.1</td>
</tr>
<tr>
<td>Doctorate</td>
<td>116</td>
<td>92.8</td>
</tr>
<tr>
<td>Total Responses</td>
<td>125 (^a)</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Note.* Total may not equal 100% as a result of rounding.

\(^a\) Responses received through telephone interviews of non-respondents are included in the total figure.

Table I-8

*Experience Teaching Online*

<table>
<thead>
<tr>
<th>No. of Responses</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No online teaching experience</td>
<td>80</td>
</tr>
<tr>
<td>Online teaching experience</td>
<td>45</td>
</tr>
<tr>
<td>Total Respondents</td>
<td>125 (^a)</td>
</tr>
</tbody>
</table>

*Note.* Total may not equal 100% as a result of rounding.

\(^a\) Responses received through telephone interviews of non-respondents are included in the total figure.
Table I-9

*Online Technology Used in Rank Order*

<table>
<thead>
<tr>
<th>Technology</th>
<th>No. of Responses</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blackboard®</td>
<td>30</td>
<td>65.2</td>
</tr>
<tr>
<td>SLN</td>
<td>8</td>
<td>17.4</td>
</tr>
<tr>
<td>WebCT®</td>
<td>5</td>
<td>10.9</td>
</tr>
<tr>
<td>Other&lt;sup&gt;a&lt;/sup&gt;</td>
<td>3</td>
<td>6.5</td>
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<td><strong>Total Responses</strong></td>
<td><strong>46</strong>&lt;sup&gt;b&lt;/sup&gt;</td>
<td><strong>100.0</strong></td>
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</tbody>
</table>

*Note.* Total may not equal 100% as a result of rounding.

<sup>a</sup>“Other” responses included new course management systems such as Angel®, TopClass®, and programs developed in-house.

<sup>b</sup> Responses reflect multiple selections by respondents.
VITA

MARGARET HILL MARTIN
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Hannibal, NY  13074

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FAX Number:  (315) 312-3062
e-mail  mmartin4@oswego.edu

EDUCATION

2003  Virginia Polytechnic Institute and State University
      Blacksburg, Virginia
      Doctor of Education
      Career & Technical Education

1992  Lynchburg College
      Lynchburg, Virginia
      Master of Education
      Curriculum & Instruction

1989  Virginia Correctional Academy,
      Department of Corrections, Waynesboro, Virginia
      State Certification - Correctional
      Officer, Graduated No. 1 in class

1987  Maine Criminal Justice Academy
      Waterville, Maine
      State Certification - Correctional
      Officer

1972  University of South Florida
      Tampa, Florida
      Bachelor of Arts in Education
      Business Education

1971  St. Petersburg Junior College
      St. Petersburg, Florida
      General Studies

1966  Largo Senior High School
      Largo, Florida
      Diploma

AREAS OF COMPETENCY IN TEACHING

  Curriculum Development in Vocational Education
  Evaluation and Assessment in Vocational Education
  Methods of Teaching
  Language Arts in the Vocational Classroom
  Student Teaching Supervision
  Secretarial Science – General Business
  Secretarial Science – Legal
  Computer Applications (PC and Macintosh platforms)
  Web Page Development (HTML coding and FrontPage)

PRESENTATIONS


**EMPLOYMENT HISTORY**

*Higher Education*

August 1999 – Present  Assistant Professor, Department of Vocational Teacher Preparation, State University of New York at Oswego

**Teaching Responsibility**

Teach graduate and undergraduate courses in curriculum development, evaluation and measurement, methods, and an on-line course in curriculum development.

Supervise student teachers at both comprehensive high schools and vocational-technical schools.

Advisor for 29 undergraduate majors in Vocational-Technical Education; predominantly transfer students from other educational institutions.

Responsible for on-going recruitment efforts for Vocational Technical Education at SUNY College at Oswego.

**University Service**

*Committee Work*

- Faculty Assembly representative
- Continuing Education/Summer Session Council
- School of Education representative to Admission's Office "Theme Day" program
- School of Education Assessment Sub-committee
- School of Education Educational Technology Sub-committee
- TEACH Act Committee (Technology, Education & Copyright Harmonization Act)
- Faculty Council
- New Faculty Orientation Committee

*Departmental Committee Work*

- Departmental Curriculum Committee – revising undergraduate and graduate programs
- Departmental Representative to School of Education “Theme Day”
- Co-Advisor to V.T.E.A. (Vocational Technical Education Association)
- Departmental Representative to Oswego Campus Technology Committee

October 1998 – May, 1999  Adjunct Faculty, University of Virginia, Charlottesville, VA.

January 1996 – May 1996  Adjunct Faculty, New River Community College, Dublin, VA

August 1995 – May 1997  Graduate Teaching Assistant, Virginia Polytechnic Institute and State Univ., Blacksburg, VA
September 1992 – May 1994  Adjunct Faculty, National Business College, Lynchburg, VA

September 1977 – May 1978  Business Instructor, Kee’s Business College, Norfolk, VA

**Secondary Education**

September 1997 – June 1999  Lead Teacher, Computer Technology Department, Staunton River High School, Bedford County, VA

August 1991 – July 1995  ITT Federal Services, Old Dominion Job Corps Center, Monroe, VA

**Related Work Experience**

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<thead>
<tr>
<th>Company</th>
<th>Position</th>
<th>Dates</th>
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<tr>
<td>Department of Corrections</td>
<td>Correctional Officer</td>
<td>8/88 – 7/91</td>
</tr>
<tr>
<td>Rustburg Correctional Unit #9</td>
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<tr>
<td>Rustburg, VA</td>
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<tr>
<td>Juvenile &amp; Domestic Relations Court</td>
<td>Deputy Clerk</td>
<td>1/88 – 8/88</td>
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<tr>
<td>Lynchburg, VA</td>
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<tr>
<td>Knox County Sheriff’s Department</td>
<td>Correctional Officer</td>
<td>3/87 – 1/87</td>
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<td>Rockland, ME</td>
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<td>Mid-Coast Mental Health Clinic</td>
<td>Medical Secretary</td>
<td>7/86 – 5/87</td>
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<td>Rockland, ME</td>
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<tr>
<td>Pinellas County Sheriff’s Department</td>
<td>Radio Dispatcher</td>
<td>1/81 – 6/86</td>
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<td>Largo, FL</td>
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<tr>
<td>State Attorney’s Office</td>
<td>Investigative Secretary.</td>
<td>7/78 – 9/79</td>
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<td>St. Petersburg, FL</td>
<td>(Felony Division)</td>
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<td>(two time periods)</td>
<td>Lead Investigative Secretary.</td>
<td>5/72 – 6/76</td>
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<td></td>
<td>(Misdemeanor Division)</td>
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**Publications**


**Professional Memberships**

- Alpha Sigma Lambda, Honor Society for Adults in Education (invited honorary membership, 2003)
- National Association for Business Teacher Education (Institution Representative)
- National Business Education Association (2000 - Present)
  - Eastern Business Education Association (2000 – Present)
- International Society for Business Education (2000 - Present)
- National Association of Teacher Educators for Business Education (2000 - Present)
- Phi Delta Kappa (1997 - Present)
- Association for Career and Technical Education (1992 - Present)
- Omicron Tau Theta (Voc-Ed Honor Society) 1996 - 2002