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ABSTRACT

The focus of this study is the ongoing need for empirical examination of current strategies for encouraging faculty participation in distance education. The study examined the growth in faculty participation in Internet-based distance teaching at 31 state-supported colleges and universities, members of the State University of New York Learning Network distance education consortium, over the period from 1998-2000. It compared the variety and perceived effectiveness of the institutional strategies used to encourage participation. Survey responses were received from 75 faculty members and 43 administrators at the 31 institutions. Findings suggest that faculty who have taught Internet-based distance education courses believe that the technologies and pedagogies used are conducive to rapid adoption and diffusion of this academic innovation. Faculty who have taught such courses also believe that the use of planned change strategies is important for encouraging faculty participation; however, that academic leaders have generally failed to use these strategies effectively. Faculty participation in distance education increases at a faster rate at institutions where academic leaders make more effective use of planned change strategies. Faculty participation in distance education is encouraged more at community colleges than it is at four-year institutions. Consortium membership is an effective strategy for encouraging faculty participation in distance education. Four appendixes contain the survey instrument, an interview guide, and details of faculty and administrator responses. (Contains 14 tables and 81 references.) (SLD)

ENCOURAGING PARTICIPATION IN COLLEGE AND UNIVERSITY DISTANCE EDUCATION PROGRAMS

by

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Finally, I wish to dedicate this study to my wife, Debbie, and to my children, Kevin and Kellie. There were holidays, vacations and weekends when I could not be there for them, but they were always there for me.

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Abstract

College-level distance education programs are growing rapidly, but sustainable growth in these programs will require an increase in faculty participation in distance teaching, as well as the eventual acceptance of distance education as one of the core activities of higher education organizations.

Academic leaders such as college presidents, deans, and department chairs are currently employing a variety of strategies aimed at encouraging greater faculty participation in distance education, but a limited amount of study in this area has failed to produce an agreed upon theoretical framework to guide the development or evaluation of these strategies.

The problem focus of this study is the ongoing need for empirical examination of current strategies for encouraging faculty participation in distance education, to assess the effectiveness of these strategies, and to contribute to the development of improved strategies.

This study examines growth in faculty participation in Internet-based distance teaching at 31 state-supported colleges and universities over a two-year period (1998-2000), and compares the variety and perceived effectiveness of the institutional strategies used to encourage participation. The institutions selected for this study are members of the State University of New York (SUNY) Learning Network distance education consortium. The major findings from this study suggest that:

- Faculty who have taught Internet-based distance education courses believe that the technologies and pedagogies used are conducive to rapid adoption and diffusion of this academic innovation.
- Faculty who have taught Internet-based courses believe that the use of planned change strategies is important for encouraging faculty participation, but academic leaders have generally failed to use these strategies effectively.
- Faculty participation in distance education increases at a faster rate at institutions where academic leaders make more effective use of planned change strategies.
- Faculty participation in distance teaching is encouraged more at community colleges than it is at four-year institutions.
- Consortium membership is an effective strategy for encouraging faculty participation in distance education.

The study provides a number of specific recommendations for academic leaders who wish to increase faculty participation in distance education programs.

Chapter I

Introduction

Distance education (also known as distance learning) may be the fastest growing innovation in American higher education today. It is clear that the use of modern communications technologies to deliver college level instruction is causing a number of colleges and universities to reexamine their long-term vision of the physical campus and to extend new off-campus learning opportunities to students.

Michael G. Moore (1990) has offered a definition of distance education which provides a working definition of the term as it is commonly used in the field. In this definition, distance education consists of "all arrangements for providing instruction through print or electronic communications media to persons engaged in planned learning in a place or time different from that of the instructor or instructors" (Moore, 1990, p. xv). Asynchronous computer-based instruction over the Internet is the most widely used delivery mode for distance education today (U.S. Department of Education, 1999).

One of the fundamental reasons that colleges and universities have chosen to become engaged in distance education is to provide increased access to students who might not otherwise be able to enter or complete an educational program due to barriers surrounding the availability or convenience of attending classes on campus. Given the well documented growth in the number of working adults seeking continuing education at the college level and the ever expanding availability of communications technology, colleges are not surprisingly finding a growing interest in the access and flexibility provided by distance education.

As a result, distance education seems to have virtually exploded onto the scene, as colleges and universities rush to develop and market new distance education programs at a pace so rapid that it has become almost impossible to identify the exact number of institutions offering instruction at a distance today. Results from a national survey of colleges and universities conducted by the National Center for Education Statistics indicate that 44% of America's higher education institutions offered one or more distance education courses during the 1997-98 academic year, and that an additional 21% planned to offer distance courses by 2000-01 (U.S. Department of Education, 1999, p. 48). If these data are accurate, it may be that a majority of America's colleges and universities are, in fact, already engaged in distance education.

Colleges and universities that choose to become engaged in distance education programs must be prepared to deal with a variety of issues surrounding innovation and change, since distance learning is clearly not "business as usual" for the students, faculty, and administrators involved. The lecture hall no longer seats all the students. In fact, faculty and students rarely meet face-to-face. Course materials and assignments can be exchanged courtesy of the World Wide Web and Federal Express. This type of education is clearly not for those who hesitate to try something new!

While rapid growth is taking place in the development of new distance education programs across the United States, it is important to note that a number of American colleges and universities have been engaged in telecommunication-based distance education since the early 1980's, and that distance education is an international phenomenon (Moore, 1990). There is a growing body of research literature providing a conceptual and theoretical basis for the continuing growth and development of distance education in America.

Scholars have pointed specifically to a need for additional research to learn more about the distinguishing characteristics of high-performing distance education systems (Murgatroyd & Woudstra, 1990), and the need to develop a managerial literature capable of providing a basis for leadership and innovation as institutions develop and expand distance education programs (Duning, 1990). There is a growing interest among the leaders of our colleges and universities for research and information that will allow them to better manage their distance education activities and respond effectively to the educational needs of a growing and changing student population.

Problem Statement

College-level distance education programs are growing rapidly, but sustainable growth in these programs will require an increase in faculty participation in distance teaching, as well as the eventual acceptance of distance education as one of the core activities of higher education organizations. Faculty adoption of new instructional technologies and pedagogies is clearly essential to the future acceptance and growth of distance education (Bankirer, 1987; Black, 1992; Clark, 1993; Dillon & Walsh, 1992; Olcott, 1994; Parisot, 1997; Stinehart, 1988; Wolcott & Haderlie, 1996).

Academic leaders such as college presidents, deans, and department chairs are currently employing a variety of institutional strategies aimed at encouraging greater faculty participation in distance education, but a limited amount of study in this area has failed to produce an agreed upon theoretical framework to guide the development or evaluation of these strategies.

The problem focus of this study is the ongoing need for empirical examination of current strategies for encouraging faculty participation in distance education to assess the effectiveness of these strategies and to contribute to the development of improved

strategies. Government officials, university trustees, college faculty and administrators, and others in leadership positions concerned with the future growth and development of distance education are included in the potential audience interested in this research topic.

Objectives of the Study

The principal objectives of this study may be summarized as follows:

1. To examine how existing theories of innovation diffusion and planned organizational change may provide a framework for the development and evaluation of institutional strategies to encourage faculty participation in distance education.

2. To identify and describe the strategies currently employed by a group of state-supported colleges and universities to encourage faculty participation in distance education.

3. To illustrate the effects that specific strategies or types of strategies may have on increasing faculty participation in distance education through a comparative case study of the selected institutions.

4. To examine specifically the effects that institutional membership in a distance education consortium may have on faculty participation in teaching Internet-based distance education courses.

The institutions selected for this study include 31 colleges and universities who are members of the State University of New York (SUNY) Learning Network distance education consortium. The study examines how faculty participation in Internet-based distance education has grown at the selected institutions over a period of two academic years (1998-99 and 1999-2000), and compares the variety and perceived effectiveness of institutional strategies used to encourage faculty participation during this period. One objective of this comparative analysis is to test the general proposition that colleges and

universities that deal more effectively with the driving and restraining forces surrounding faculty participation in distance education will demonstrate greater growth in faculty participation than those that deal with these forces less effectively.

Research Questions

The research questions that are examined in this study are meant to explore how academic leaders use targeted institutional strategies to increase faculty participation in distance education programs. A review of the research literature pertaining to distance education, innovation diffusion, and planned organizational change in colleges and universities is presented in Chapter II to provide a theoretical framework for the study. The theoretical framework presented in Chapter III identifies a number of factors and strategies to be examined to determine their potential relationship to increased faculty participation in distance education.

The primary research question for this study is:

- How can academic leaders increase faculty participation in college and university distance education programs?

There are also several important subquestions for this study. They include the following:

- What are the driving forces and restraining forces associated with faculty participation in distance education?
- Does Internet-based distance education exhibit attribute characteristics that encourage faculty participation in teaching distance education courses?
- To what extent do academic leaders use planned change strategies to encourage faculty participation in distance education?
- Does faculty participation in distance education increase more rapidly when academic leaders use planned change strategies more effectively?

- How does institutional membership in a distance education consortium affect faculty adoption of distance education innovations?

For the purposes of this study, faculty participation in distance education is defined as involvement in teaching one or more college-level distance education courses using a specific Internet-based communication technology.

Context for the Study

Three themes seem to emerge from a general review of journal articles, books, presidential speeches, faculty committee reports, and press releases surrounding higher education's increasing interest in distance education and suggesting possible motives underlying this interest. The first theme points to the need that colleges and universities have to serve the educational needs of a growing and changing student population by increasing access to higher education. The second theme points to a desire to compete effectively with other colleges and universities, and with private enterprise, as colleges and universities seek to maintain or increase student enrollments. The third theme points to an interest in increasing the teaching and learning productivity of higher education.

Many American colleges and universities believe that there is a significant market for distance education, and that institutions that are able to provide distance-delivered instruction are well-positioned to increase student access and to attract new enrollments. Survey data from a 1997 national study of distance education by the U.S. Department of Education indicated that increasing institutional access to new student audiences was a "somewhat important" or "very important" goal for 97% of the colleges and universities offering distance education courses. Ninety-one percent (91%) of these institutions indicated that increasing enrollments was an important goal for their distance education

program, and 56% indicated that their program had met this goal to a "moderate extent" or "major extent" (U.S. Department of Education, 1997, p. 31).

The productivity theme (or motive) that emerges in the literature and the media is somewhat more controversial than the access and enrollment themes. Productivity (especially faculty productivity) is often mentioned as a reason for colleges to engage in distance education. The assumption in this regard is that distance education technologies can result in higher student-faculty ratios in the courses provided. This assumption is evident in a recommendation made by the California Postsecondary Education Commission in 1993 aimed at increasing the use of educational technology to deal with that state's fiscal crisis:

> This option offers the potential of accommodating larger numbers of students without expanding the number of faculty employed; the ability to provide instruction to students located in remote areas without building new campuses or educational centers; the ability to offer instruction in certain disciplinary areas without hiring new faculty; and the ability to provide instruction at any hour of the day or week (California Community Colleges, 1993, p. 6).

An article written by Lisa Guernsey for The Chronicle of Higher Education (1997, March 27) presents an interesting new perspective on the issues surrounding student access, campus enrollments, and productivity in distance education. Guernsey suggests that there may be a brewing competition for college resources between distance and traditional education. As institutions devote more resources to develop distance education programs, there may be less funding available for the continuing development of traditional education in the classroom. This issue is complicated by the fact that distance education programs are attracting significant numbers of traditional-aged students who would normally attend campus-based classes but are now choosing the convenience of asynchronous distance learning (National Education Association, 2000,

p. 31). If institutions devote substantial resources toward providing new distance education programs, but do not gain an equally substantial increase in tuition revenues by attracting new students (versus continuing students), then a resource shift of some magnitude from traditional to distance education would seem unavoidable.

There is also a growing concern that distance education programs offered by large public universities may pose a new threat to the lucrative campus-based continuing education programs offered by many smaller colleges. The fear is that the same students who now enroll in part-time degree programs on the campuses of small regional colleges might soon migrate to distance education programs offered by public "flagship" institutions that are less costly and more convenient, and that allow for graduation from a more prestigious university (Selingo, 1998, May 1).

The SUNY Learning Network

It is within this broader context of external pressures, growth and competition in distance education that the State University of New York (SUNY) system has given birth to the SUNY Learning Network. The SUNY Learning Network is a loosely organized consortium with a current membership of 47 SUNY campuses that have chosen to join forces with the central administration's Office of Advanced Learning and Information Services to offer distance education courses and degree programs using Internet-based technologies and "on-line" instructional techniques. The Alfred P. Sloan Foundation has provided a total of $4.1 million to help support the establishment and growth of the SUNY Learning Network since the program was launched in 1994-95. The program began with four on-line courses and 56 students in the Fall 1995 semester, and grew to 282 students and 19 courses by Spring 1997. During the 1997-98 academic year, 20 affiliated SUNY campuses offered a total of 112 on-line courses to more than 2000

enrolled students. Thirty-six campuses in the consortium offered on-line classes during the 1998-99 academic year, which has been selected as the "base year" for this study (SUNY Learning Network Website, February 18, 2000; SUNY News Release, August 13, 1998; SUNY News Release, June 24, 1999). Course registrations in SUNY Learning Network courses grew to more than 6000 in 1998-99, and were projected to reach 10,000 by the end of the 1999-2000 academic year (Fredericksen, 1999).

One of the "driving forces" behind the establishment of the SUNY Learning Network consortium has been a belief that educational technology is bringing fundamental changes to higher education, and that the State University of New York must keep pace with these changes in order to remain competitive. This was clearly the point of view expressed by former SUNY Chancellor Thomas Bartlett, as he spoke to the University Faculty Senate and a statewide satellite television audience on January 27, 1995. Bartlett suggested that SUNY was on the verge of something fundamental in education in the use of technology. In fact, he declared, "we [SUNY] have no choice but to make the race. If we do not use these tools, learn to use them, and incorporate them into our larger purposes, someone else will and we will be left behind" (State University of New York, Faculty Senate Bulletin, March 1995, p. 2).

A review of SUNY documents and reports dealing with distance education issues (e.g., Feisel, 1998; Steiner, 1995) supports a conclusion that the context for the development of distance education in New York State is not unlike many other states. The State University of New York is facing external pressures to increase student access, compete for enrollments, and increase productivity. Many believe that wider use of distance education technologies and techniques should become part of the University's response, and the SUNY Learning Network has been developed to facilitate this activity.

Eric Fredericksen, the SUNY system's Assistant Provost for Advanced Learning Technology, has described the mission and objectives of the SUNY Learning Network as follows:

> The SUNY Learning Network primary mission is to bring SUNY's high quality instructional programs within reach of learners anywhere. Another objective of SLN has been to take an efficient approach in supporting the SUNY campuses. Rather than each campus reinventing the wheel, SLN has developed and implemented the appropriate operational services and support yielding both cost savings as well as the sharing of experience from one campus to another (Fredericksen, 1999, p. 3).

As this statement suggests, the SUNY system has established the SUNY Learning Network consortium to facilitate a system-wide approach to distance education that is based upon the central administration providing significant support services and technological infrastructure to the participating campuses. The central administration believes that this model is more cost effective than funding separate distance education programs and technologies on each campus, and that the opportunity for faculty and administrators from the various campuses to share their experiences will enhance system-wide potential to deliver distance education programs and increase student access to higher education.

Chapter II

Review Of Related Literature

One of the major reasons for conducting a review of related research literature is to inform and contribute to the development of theories, models, or propositions related to the topic of study. This is especially true of research designs that emphasize quantitative research methods (e.g., surveys or experiments) to test or verify theories proposed in the literature. In quantitative research, a review of related literature is used deductively as a basis for advancing research questions or hypotheses to be tested in the research that follows (Cooper, 1989; Creswell, 1994).

A literature review performs a somewhat different function in studies which utilize a qualitative research design. The process of qualitative research is an inductive one, in which the researcher builds abstractions, concepts, hypotheses, and theories from details gathered during the study (Bogdan & Biklen, 1992; LeCompte & Preissle, 1993; Merriam, 1988).

Case study research methodologies often seek to employ a combination of quantitative and qualitative methods in data collection and analysis, and the use of these mixed methods suggests that a review of related literature can play a unique and specific role in providing the theoretical foundation for case study research. The role of theory development prior to the conduct of any data collection is a major point of difference between case studies and related qualitative methodologies such as ethnography or grounded theory (Yin, 1994). These related qualitative research methods typically seek to avoid the development of specific theoretical propositions prior to data collection, in

the belief that theories should develop through a "naturalistic" process of examining qualitative data collected during the study (Hutchinson, 1988; Lincoln & Guba, 1985).

The alternative view presented by proponents of case study research is that theory development is an essential part of research design, whether the case study's purpose is to develop or to test theory (Yin, 1994). With this in mind, the review of related literature included in this study has been undertaken to assist in the development of theoretical propositions and research questions which have as their basis two conceptual models developed by Rogers (1983) and Lindquist (1978). This study will explore the relevance of these models and related concepts within the context of distance education.

Topical Areas of the Literature Review

This review of related literature has assumed that an examination of planned organizational change and faculty participation in distance education programs can benefit from a review and critique of some of the prominent theories and conceptual models developed by other researchers in three topical areas that appear to have relevance for this type of study. These three topical areas are: (a) the diffusion of innovations within the context of distance education, (b) the organizational culture found within colleges and universities, and how this culture influences distance education programs, and (c) college and university collaboration and consortium membership within the context of distance education.

Innovation Diffusion and Distance Education

A study examining faculty participation in distance education and the ongoing development and growth of distance education programs can benefit from a broad review of the fundamental concepts and theories which have been developed to explain the

social psychology of innovation, and the diffusion of educational innovations within colleges and universities. The range of literature on these general topics is beyond the scope of this literature review, but extensive reviews completed by Dill and Friedman (1979), Lindquist (1974), Nordvall (1982), and Seymour (1988) provide a strong basis for further research.

Perhaps the most widely recognized research concerning the diffusion or dissemination of innovations is contained in the work of Everett M. Rogers (1983). While Rogers' original research was not conducted to explain the process of innovation diffusion within colleges or universities, his theories have been applied in a number of studies dealing with the diffusion of distance education innovations in higher education (e.g., Bankirer, 1987; Evans & Leppman, 1967; Olcott, 1994; Parisot, 1997).

In the third edition of his landmark Diffusion of Innovations (1983), Rogers presents a theoretical framework which attempts to describe how people react to the introduction of innovative ideas or practices. He suggests that an innovation will typically generate some degree of uncertainty for individuals and organizations. This causes them to seek additional information to better understand the implications associated with adopting the innovation. Once these information-seeking activities have reduced the uncertainty to a tolerable level, a decision concerning adoption or rejection of the innovation will be made. This suggests that the diffusion of an innovation depends heavily upon a process of communication and social interaction:

> Diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system. It is a special type of communication, in that the messages are concerned with new ideas.... It is this newness of the idea in the message content of communication that gives diffusion its special character. The newness means that some degree of uncertainty is involved (Rogers, 1983, pp. 5-6).

Rogers devotes much of his work to examining factors which may speed up or slow down the diffusion of an innovation. He outlines five attribute characteristics of innovations which can affect their rate of adoption or rejection. Innovations are adopted most easily and quickly when potential adopters perceive:

1. They are more advantageous than the idea they seek to replace.
2. They are compatible with existing values, needs, and experiences.
3. They are simple to understand and require few new skills.
4. They can be tried or tested on a limited basis prior to greater commitment.
5. Their results are easily visible to others (1983, pp. 15-16).

If we accept the notion that these characteristics can, in fact, affect the rate of diffusion of an innovation within the context of higher education, then colleges and universities seeking to expand their distance education capabilities may benefit from examining which of these characteristics exist in their programs, and which must be further developed or better promoted.

A second widely recognized framework developed by Rogers suggests that individuals in a social system will not all adopt an innovation at the same time. Rather, they adopt in a time sequence, and they can be classified into adopter categories based upon how quickly they first begin using a new idea. Rogers suggests a normal distribution of adopters exists, and can be divided into five categories:

1. Innovators are venturesome and able to cope with a high degree of uncertainty about innovation. They make up an estimated 2.5% of the population.

2. Early Adopters are respected opinion leaders who are among the earliest to test an innovation and communicate its characteristics to others. They make up an estimated 13.5% of the population.

3. Early Majority members adopt new ideas just before the average member of the social system. They take some amount of time to examine an innovation, before adopting it, and they make up an estimated 34% of the population.

4. Late Majority members require some amount of pressure before adopting a new idea and will take longer than the average time. They make up an estimated 34% of the population.

5. Laggards are the last to adopt an innovation. They tend to be suspicious of innovations, and make up an estimated 16% of the population (1983, pp. 241 - 250).

The relevance of these adopter categories in the context of distance education is that a college or university seeking to introduce or expand its distance education program must initially focus its efforts on identifying and engaging the innovators and early adopters found within the organization. These are the people who will struggle to overcome the uncertainties involved in initiating this new type of education. Without them, a distance education program will almost certainly fail to survive.

While the third edition of Diffusion of Innovations (1983) represents Rogers' most comprehensive work on this subject, the original edition was published in 1962, and the author's theoretical observations influenced several earlier studies of innovation and change. Jack Lindquist's Strategies for Change (1978) is perhaps one of the most often cited of these studies. It is especially relevant for those who might wish to apply Rogers' theories to the study of innovation in higher education, or to integrate Rogers' theories with others examining organizational change.

Lindquist was a participant in a four-year long action-research project that examined the phenomenon of planned organizational change in five liberal arts colleges and two universities from 1971 to 1975. He used participant observation methods to

record and describe his findings in these seven case studies. Each case history traced the process of a college or university attempting to introduce or implement some type of academic innovation. The attempted innovations ranged from a change in academic calendar, to the use of contract learning, to the development of new academic departments or degree programs. The common features found in this variety of academic innovations were that they were: (a) aimed at solving local problems which were identified by specific institutions, (b) developed in response to external pressures, and (c) guided in their development by an examination of similar innovations found at other institutions.

Lindquist identifies four general types of institutional strategies used to encourage the adoption of innovations and the accomplishment of planned organizational change:

1. Rational Planning Strategies concentrate on developing the message that change is needed and assume that the communication of a rational case will ensure that the desired change will take place.

2. Social Interaction Strategies concentrate on the interpersonal communication processes people use to gain attention and acceptance for new ideas by consulting with others.

3. Problem Solving Strategies focus on the use of human relations skills to identify and address attitudinal and psychological barriers to change, and to gain consensus on potential solutions to problems facing the organization.

4. Political Strategies also focus on individual and group need and willingness to change, but these strategies emphasize the use of authority or power to force change when necessary.

Lindquist argues that all four of these general strategies for change should be combined to formulate a more comprehensive strategy. The result is an "adaptive development" strategy which: (a) develops a rational case for change, (b) stimulates communication among opinion leaders and connects them with information sources familiar with the proposed innovation, (c) uses human relations strategies to address attitudinal barriers and to gain consensus for a specific problem-solving approach, and (d) builds the political coalitions required to gain formal organizational approval of the proposed innovation and the authority to implement related changes in institutional policies and structures (1978, pp. 1-9).

Lindquist also proposes that five factors stand out as critical ingredients in any attempt to introduce change in the practices of complex organizations. A successful change process requires that change leaders: (a) establish a social interaction process to link people with new information, perspectives, and ideas; (b) demonstrate their openness to considering alternative views and opinions; (c) use a combination of leadership strategies and styles to fit the circumstances; (d) help others to feel ownership in an agreed-upon strategy for change, and (e) provide material and psychic rewards for participants in the change process, and for those who adopt new practices or behaviors (1978, pp. 240-243).

Distance Education Innovation Studies

Rogers suggests that scholars interested in studying the diffusion of innovations should focus on the in-depth approach of case study research aimed at understanding the innovation-decision process over time (1983, p. 358). Several case studies have been completed focusing on how college faculty adopt distance education innovations.

Perhaps the earliest study of this kind was completed by Richard Evans and Peter

Leppmann (1967). This study examined resistance to the adoption of instructional television (an early form of telecommunications-based distance education). The Evans and Leppmann study found that instructional television was unlikely to be adopted rapidly in the university studied because most respondents believed this innovation: (a) was inconsistent with existing instructional practices emphasizing personal contact between faculty and students, (b) was too complex to adopt easily, and (c) was being imposed by university administration rather than originating within faculty departments.

Kathleen Stinehart conducted one of the earliest studies of faculty attitudes towards distance teaching that asked specifically how faculty participation could be increased (Stinehart, 1988). She used a review of existing research literature to develop a survey instrument which examined six general factor areas she believed might influence faculty decisions to engage in distance teaching. These areas were: (a) faculty awareness of distance teaching, (b) the use of technology for instruction, (c) logistical considerations in course delivery, (d) quality factors in distance teaching, (e) institutional support and rewards, and (f) faculty control over the teaching-learning process.

The sample population studied consisted of 139 faculty members employed at Iowa State University. Half of this sample had taught at a distance using videotape, audioconferencing, satellite broadcast or pre-produced telecourses. The other half was not experienced in distance education. Seventy-six percent (76%) of the faculty in the sample population returned usable surveys (N =106).

Multiple regression analyses of Stinehart's survey data identified the issue of instructor control over the teaching-learning process as the single greatest predictor of willingness to teach at a distance. The more faculty perceived distance teaching as lessening their control over course planning and delivery, the less willing they were to try

it. None of the other five factor areas examined significantly affected willingness to teach at a distance. Stinehart concluded that faculty participation would best be encouraged by choosing course delivery modes and technologies that allowed for the greatest amount of faculty control (1988, pp. 426-428).

The Stinehart (1988) study demonstrates some limitations found frequently in distance education innovation studies. These include: (a) the selection of a study population from a single college or university, and (b) the selection of a population of faculty who have used a variety of different distance education technologies. Selection of participants from a single institution clearly restricts the opportunity to study the impact that differing institutional cultures or types may have upon faculty participation, and the mixing of faculty who have used different distance education technologies suggests they have shared a common distance teaching experience when they have not. It should be noted that Stinehart recognized the second of these limitations, but was not able to correct for it in her study due to insufficient data (1988, p. 427). This case study of the SUNY Learning Network seeks to avoid these limitations by collecting data from faculty employed at 31 institutions representing several institutional types, and by restricting the sample faculty population to include only those who have taught distance education courses using the same Internet-based technologies.

A review of twenty-four distance education studies conducted by Dillon and Walsh (1992) found that leadership was the most neglected factor in the growth of distance education programs, and that faculty attitudes were far more important than structural or technical obstacles in determining faculty participation. Research completed more recently by Parisot (1997) confirms these findings.

Parisot (1997) conducted a case study designed to identify and describe the factors that influence faculty decisions relative to the adoption of distance learning technologies and related changes in teaching style. She suggests that her findings are compatible with Rogers' (1983) diffusion of innovation theory, and that this study provides a conceptual model to guide the development of institutional policies aimed at encouraging faculty participation in distance education.

The population for the Parisot study were faculty of a public community college, from which Parisot selected a total of 27 participants using purposeful sampling techniques (Bogden & Biklen, 1992). Faculty were selected to represent a variety of disciplines, gender diversity, and both full-time faculty and faculty who held joint administrative positions.

The study combined the use of a quantitative survey instrument and qualitative interviewing techniques in a two-phase research design. Faculty in this study identified three major factors that encourage faculty use of technology in teaching: (a) opportunities for role modeling, (b) involvement in the development of technology plans, and (c) appropriate incentives and institutional support (e.g., training, equipment). Faculty also identified key barriers to embracing the use of technology as an instructional tool, which centered on the investment of time required to develop new programs, and on negative attitudes surrounding the technology. Parisot's findings suggest that in order to gain faculty support, the technology must: (a) be easy to use, (b) be consistent with existing faculty values, and (c) offer an identifiable advantage when used. These findings are compatible with Rogers' (1983) theory indicating that complexity, compatibility, observability, trialability, and perceived relative advantage are key factors in the rate of innovation adoption and diffusion (Parisot, 1997).

Parisot concludes that the current barriers to increased faculty participation in distance education can be reduced through institutional leadership and policy development built around faculty and administrator consensus. She suggests that all segments must agree upon the need for increased distance education capabilities, as well as the strategies or policies required to recognize, reward, and support faculty participation (1997, pp. 11-13). In essence, Parisot suggests that administrative leaders should use planned change strategies to develop consensus and to encourage the adoption of distance education innovations.

Olcott (1994) completed a doctoral dissertation study which focused on the development of strategies to encourage faculty receptivity to distance teaching. This dissertation incorporated a series of articles published earlier by Olcott, which were based upon smaller studies he had conducted. These studies found that the key issue areas influencing faculty receptivity to distance teaching include: (a) the potential alteration of faculty roles, (b) concerns about academic quality, (c) inload versus overload teaching assignments, (d) promotion and tenure policies, (e) the availability of support services, and (f) the relationship to traditional academic norms. Olcott concluded that distance education compels postsecondary institutions to reduce existing barriers to faculty participation by compensating, rewarding, and training faculty at levels commensurate with traditional instructional activities and to provide instructional and administrative support services designed to ensure student access to high quality programs (1994, p. 152).

The current study attempts to build upon earlier research findings by undertaking a further examination of existing barriers to faculty participation in distance teaching, institutional reward systems, and leadership in program planning and policy development

for distance education, and examines the possible effects of these factors on faculty participation.

Organizational Culture and Distance Education

There is a certain amount of "face validity" to the proposition that America's colleges and universities exhibit a special form of organizational culture. The kinds of interactions that take place between college faculty, administrators, and students are based upon a uniquely academic culture which has developed in our institutions over the course of history. One should certainly not assume, however, that the organizational cultures of colleges and universities have all been cut from the same cloth. There are, indeed, significant cultural differences among the range of colleges and universities in America today, and these differences may potentially affect an institution's level of engagement in distance education. Ellen Chaffee and William Tierney are among those who have outlined the importance of further developing our understanding of organizational cultures within higher education:

> Institutions are certainly influenced by powerful external factors such as demographic, economic, and political conditions, yet they are also shaped by strong forces that emanate from within. This internal dynamic has its roots in the history of the organization and derives its force from the values, traditions, processes, and goals held by those most intimately involved in the organization's workings. The most fundamental construct of an organization, as of a society, is its culture. An organization's culture is reflected in what is done, how it is done, and who is involved in doing it. It concerns decisions, actions, and communication both on an instrumental and a symbolic level (Chaffee & Tierney, 1988, p. 7).

The field of higher education research has seen growing interest in establishing the relationships between organizational culture and the management of colleges and universities. Burton Clark has pioneered work on distinctive colleges as cultures (1970), and the effects of academic disciplines and institutional types on the thought and behavior of college faculty (1987). Other researchers have focused on faculty cultures

within higher education (e.g., Austin, 1990; Becker, 1981; Freedman, 1979) and the impact of college leadership on organizational culture (e.g., Chaffee, 1985; Lindquist, 1978). Dill (1982) has argued that academic management needs more emphasis on the management of academic culture and less emphasis on market-driven behavior and strict management control, noting the significant differences between businesses and universities. Dill also proposes that the values chosen for emphasis in managing academic cultures need to be compatible with core faculty values in the areas of teaching, research, and scholarship. Whetten and Cameron (1985) conclude that effective academic administrators use cultural symbols to highlight important organizational norms, and that seldom has a truly excellent college or university emerged that was not driven by a unique and pervasive culture.

One of the primary advantages of the case study method is that it encourages the researcher to collect data from a variety of sources in order to develop a "thick description" of organizational culture and a realistic portrayal of the complex interactions involved in organizational decision-making and communication processes (Bogdan & Biklin, 1982; Creswell, 1994; Maykut & Morehouse, 1994; Yin, 1994). Chaffee and Tierney (1988) developed a conceptual model to provide the basis for a series of case studies in which they compared the organizational cultures of a group of seven colleges and universities along three interrelated dimensions: (a) structure, (b) environment, and (c) values. The nature of these three dimensions of organizational culture proposed by Chaffee and Tierney can be summarized as follows:

1. The structural dimension refers to various ways in which the organization accomplishes its activities, including programmatic, fiscal, and governance mechanisms. An examination of the structural dimension should include the processes by which

activities are accomplished in the college setting, and explore beyond the formalized roles and responsibilities of the individuals involved. Structure involves both formal and informal aspects of decision-making, and includes both daily operations and long-range strategies. Planning processes are also part of the structural dimension.

2. The environmental dimension of organizational culture refers to the ever-changing context of people, events, demands, and constraints in which the organization operates. It is important to note that this environmental context may be defined as much by individual perceptions as it is through facts. Individual members of the organization may interpret the environmental context differently, and organizations may even "create" their own environmental context through selective attention and interpretation.

3. The values dimension of the Chaffee and Tierney framework refers to the beliefs, norms, and priorities held by members of the organization. Values that pertain to the organization and its activities (e.g., distance education) are especially important, and the extent to which values are congruent among individuals and subgroups (e.g., faculty and administrators) can have an important effect upon institutional decision-making and communication. Values are most apparent in an organization's mission and goals. These help to provide a collective understanding of the institution, and partly define what members should or should not do. These factors should also be reflected in institutional reward systems. The manner in which an organization's leaders define and express organizational goals and values can also provide the basis for stimulating organizational change (Chaffee & Tierney, 1988, pp. 18-26).

This study includes an examination of how organizational cultures and organizational change strategies have affected the adoption and diffusion of distance education. The organizational structure, environment, and values of the selected

institutions are examined as part of the study. Several earlier studies have examined these cultural dimensions within the specific context of distance education.

Organizational Structure of Distance Education

Desmond Keegan (1996) has developed a typology of distance teaching systems which can be useful in helping to identify characteristics which distinguish among institutions engaged in distance education, as well as identifying organizational or didactic factors which may characterize a particular group of these institutions. Building upon the work of earlier researchers including Neil (1981), this latest typology from Keegan begins by proposing that the most fundamental distinction between the various institutions engaged in distance education is between autonomous distance teaching institutions and distance subsections or departments found in conventional institutions.

Autonomous distance teaching institutions include those which have been developed for the primary purpose of providing distance education. These institutions may be components of a state or national education system, but they are clearly identified as distance teaching universities or open universities within those systems. They have their own faculties and are autonomous at the institutional level in the areas of finance, examination and accreditation, curriculum, course delivery, and student support systems (Keegan, 1996). Prominent examples of autonomous distance teaching institutions would include the Open University of the United Kingdom and other "mega-universities" currently serving hundreds of thousands of students within each institution (Daniel, 1996). The University of Phoenix may represent a contemporary American institution most closely exhibiting the characteristics of an autonomous distance teaching university, and the recent growth and development of this institution has been the subject of a good deal of media attention.

The Keegan typology would classify the majority of American distance teaching institutions as "mixed institutions" in which distance education is provided through the distance education subsections or departments of conventional colleges and universities (1996, p. 137). The key characteristic of mixed institutions is that they enroll both distant and resident students. Data provided by The National Center for Education Statistics (U.S. Department of Education, 1999) suggest that a majority of America's conventional institutions are now engaged in distance education. Up to this point in time, the American model of distance education has clearly developed as a mixed institution type model. Distance education programs in America today are typically provided by well-established conventional institutions whose primary focus is on degree-granting academic programs and campus-based instruction. In this context, distance education programs remain somewhat periferal within America's conventional colleges and universities, but this is not to say that these institutions are not interested in distance education. Indeed, they seem quite enamored with it, and growing enrollment figures suggest that American institutions have become increasingly interested in expanding their distance education programs (U.S. Department of Education, 1997). The institutions selected for the proposed study are all conventional institutions serving both distant and campus-based student populations.

Goals, Values, and Rewards in Distance Education

A review of the objectives for this study indicates that the study will explore the effects that specific planned change strategies may have on increasing faculty participation in distance education. This examination will be based on a number of fundamental assumptions surrounding the effects that goals, values, and rewards have

upon both individual and institutional participation. These are areas which have already received some amount of attention in the research literature of distance education.

There are two types of studies which seem especially relevant to this literature review given their potential to help the researcher identify and explore individual and institutional goals, values, and rewards as part of this study. These are: (a) studies that identify specific goals, values, and rewards which encourage or discourage faculty participation in distance education, and (b) studies that examine the differences and similarities between faculty perspectives and administrator perspectives regarding the goals, values, and rewards associated with distance education. A comparative examination of the attitudes and goals which participating faculty and administrators have regarding distance education has been included as part of this study. An examination of the reward systems developed by selected institutions to encourage faculty participation and program growth is another important element under consideration.

Bankirer (1987) conducted a doctoral dissertation study at the University of Wyoming which examined faculty attitudes toward the use of technology in the delivery of distance education. Surveys designed to gather information on attitudes and demographics were distributed to a sample population of 213 faculty employed at the University of Wyoming and Colorado State University. The selection of these two institutions was influenced by the similarities in their Land Grant institution mission of outreach and service. The sample population was distributed evenly across three faculty ranks, five academic disciplines (Engineering, Business, Education, Agriculture, Arts and Sciences), and the two participating institutions. Ninety-three usable surveys (44% response) were analyzed using Chi-square and log-linear statistics.

Bankirer found that faculty awareness and perceptions of distance education technologies were influenced to some extent by their age, faculty rank and academic discipline, but that the most influential factor was the university where they were employed. Her findings suggest that differences in these two university cultures were particularly significant in shaping faculty attitudes concerning the use of distance education technologies. Bankirer also concluded that:

1. To be successful in the implementation of technology-based instruction, the innovation must be perceived to be consistent with existing values of the institution.

2. The decision to use technology must illustrate an institutional commitment from the top level administration.

3. Decisions as to which technologies to use and the development of class materials must come from the faculty.

4. Academic leaders who want to advance the use of distance education technologies should identify tenured faculty from technical or scientific disciplines, who are respected by their peers, and enlist these faculty to aid in the selection of technologies and to model their use.

5. Promotion and tenure systems should reward the use and development of technology for instruction with the same significance as publication and research activities (Bankirer, 1987, pp. 95-96).

The chief weakness of the Bankirer (1987) study is its examination of only two universities. Given the study's findings regarding the importance of organizational culture, it seems reasonable that research involving a larger number and variety of institutions could confirm or refute some of Bankirer's conclusions. In spite of this limitation, the Bankirer (1987) study is important as an early example of research aimed

at identifying and reducing attitudinal barriers to faculty participation in distance education. The author makes specific references to Rogers' innovation diffusion model, and her concluding recommendations fit clearly within the organizational change process suggested by Lindquist (1978).

A two-phase study conducted by Linda L. Wolcott and Sheri Haderlie presents a number of important findings concerning institutional reward practices and distance education (Wolcott & Haderlie, 1997; Wolcott, 1997b). The purpose of the first phase of this study was to examine current reward practices at a number of colleges and universities to identify rewards and incentives used to encourage and/or support faculty participation in distance education. The purpose of the second phase of this study was to describe the relationship between distance teaching and the faculty reward system.

The first phase of the Wolcott and Haderlie (1997) study collected data through a survey of the institutional representatives of the Western Cooperative for Educational Telecommunication, a consortium organization affiliated with the Western Interstate Commission for Higher Education. The survey was designed to identify current reward practices, with emphasis on the forms and methods of compensation and the types of services provided to support distance teaching. Forty-five of 88 institutional representatives from 14 states completed the survey. With one exception, survey respondents were either college or university administrators or distance education program administrators. The following findings summarize the reward practices identified by these respondents in the 45 colleges and universities studied:

1. Institutional policies in compensation and rewards for distance teaching vary widely between institutions, and within institutions. The policies and practices of academic departments in the same institution may vary significantly.

2. Most institutions (85.4%) compensate full-time, tenure track faculty members for their distance teaching by including distance courses as part of the normally assigned faculty workload, or as an overload. Institutions also compensated faculty members for developing and teaching distance courses through stipends (57.1%), course development grants (52.4%) and release time/reduced course loads (40.5%).

3. Instructional support and faculty development opportunities are widely available, with institutions commonly providing faculty training workshops (73.2%) and assistance in developing instructional materials (63.4%). Most institutions use site facilitators to assist faculty in the delivery of distance courses (69.0%), but only one third provide instructional designers to support course development, and only seventeen percent provide graders or teaching assistants to assist in course delivery. This lack of support personnel acts as a major disincentive to faculty participation in distance teaching as well as a detriment to course quality.

4. Additional factors which may discourage faculty participation include: lack of "central support" from departmental administrators and/or higher level administrators, lack of adequate compensation and recognition, and negative attitudes which other faculty display toward distance education and the use of technology in teaching (Wolcott & Haderlie, 1997).

The second phase of this study (Wolcott, 1997b) examined the relationship between distance teaching and the faculty reward system using qualitative research methods. Data was collected through structured interviews with faculty members, distance education program administrators, and academic officers at four research universities that were included in the earlier survey phase of the study. Interview participants were identified with the assistance of the institutional representatives who took part in the survey phase.

Administrators interviewed included chief academic officers and distance education program administrators, as well as selected deans and department chairpersons at each university. Faculty participants were selected based on their experience in teaching distance courses, their full-time, tenure-track status, and their proximity (three years plus or minus) to tenure. A total of thirty-two participants were interviewed. The researchers also examined university strategic plans and tenure and promotion documents for additional data. Key findings from the second phase of this study can be summarized as follows:

1. Distance education occupies a marginal status in research universities, and is not a high priority activity. This is true even though academic units include distance education in planning documents and acknowledge its potential to assist in the achievement of university goals in the areas of student access and cost containment.

2. Teaching at a distance has little status among the activities that constitute faculty work at these universities, and is poorly rewarded as a result.

3. Distance teaching is not highly related to promotion and tenure decisions at the institutional level. Junior faculty may, in fact, place their promotion and tenure in jeopardy by investing too much time in distance teaching at the cost of more highly rewarded activities such as research.

4. Rewards for distance teaching are dependent on the academic unit's commitment to distance education, and the department chair or dean plays the key role in translating unit values into rewards (Wolcott, 1997b, pp. 15-16).

The Wolcott and Haderlie (1997) findings suggest that institutional reward practices and support services found within the context of research universities may not be well positioned to encourage significant growth in faculty participation in distance education.

It appears that the rewards and incentives used by these institutions are, for the most part, based on the same traditional practices used to reward classroom teaching. There may be a need to develop new incentives and rewards if these institutions hope to encourage significant growth in faculty participation, and some of these incentives and rewards could perhaps be developed through collaboration with other colleges and universities. Wolcott and Haderlie did not examine these issues, and their selection of four research universities (three of them Land Grant universities) for the second phase of their study may have resulted in findings that would be less observable in other types of institutions. The current study of SUNY Learning Network institutions includes a greater variety of institutional types.

A national survey of faculty attitudes toward distance education conducted by Tom Clark (1993) examined the receptivity to college-credit distance education of a random sample of 480 full-time faculty members from 57 public institutions (21 research universities, 20 large comprehensive colleges or universities, and 16 community colleges). The sample included academic department chairs, tenured faculty, and non-tenured faculty from the Chemistry, Marketing, and Political Science departments of each institution. The survey achieved a response rate of 66 percent (N=317). No college administrators employed outside the three academic departments were included in the survey. Clark's study presents several findings that appear relevant for the current case study:

1. The attitudes of respondents toward the development and distribution of distance education courses through educational consortia were: (a) more positive than attitudes toward the use of distance education in individual college/university programs, (b) more positive than attitudes toward the use of distance education in the respondents' own

academic programs, and (c) more positive than attitudes toward the respondents' personal use of distance education in teaching.

2. Only one in five responding faculty members/department chairs indicated a very positive or moderately positive attitude toward participating personally in distance education.

3. Community college faculty expressed more positive attitudes toward distance education than four-year faculty.

4. Faculty who reported substantial experience with distance education, or with media use in college teaching, expressed more positive attitudes toward participation in distance education.

5. Faculty believed that increased student access to higher education was the greatest potential benefit of distance education; only seven percent indicated that cost-effectiveness was a potential benefit.

6. Faculty opinions split almost evenly when asked if faculty participation in distance education would be rewarded adequately at their institution.

7. Faculty expressed significant concerns around the quality of student/faculty interaction in distance education (Clark, 1993).

A study by E. Joyce Black (1992) was conducted to examine specifically the attitudinal barrier to the development and expansion of distance education presented by faculty concerns about educational quality. Black proposed that "one of the major challenges facing the development and expansion of university distance [education] is faculty skepticism about its suitability for degree credit" (1992, p. 6). The purpose of Black's study was to explain why some faculty support distance education for degree credit while others do not.

Black traced the history of this debate over credibility and quality to an earlier lack of acceptance for "home study" courses and other forms of non-traditional study, and outlined a number of studies indicating that faculty familiarity with distance education is consistently associated with more positive views (1992, pp. 7-8). Black believed that a comparative study of the differences in perceptions of faculty who were supportive, opposed, or undecided about distance education was particularly important due to the nature of faculty governance processes in colleges and universities. She observed that faculty who have little knowledge of or familiarity with distance education (and who are consequently less positive) play an important role in academic decisions regarding program approval, resource allocation, and regulations governing the recognition of distance education courses for credit towards a degree (1992, pp. 8-9).

The scope of Black's study was restricted to faculty perceptions of distance education courses for degree credit and to full-time teaching faculty in one conventional Canadian university, the University of British Columbia. The study began with the administration of a survey aimed at measuring faculty familiarity with and support for distance education. A total of 50 faculty were selected from 487 survey respondents to provide a faculty sample representing the three categories of support for distance education identified by the survey (supportive = 14; divided support = 22; opposed = 14), and the perceptions of these 50 faculty were examined further in a second phase of the study using semi-structured, face-to-face interviews (1992, pp. 10-15).

The findings from Black's study which appear most relevant to the current case study of SUNY Learning Network institutions can be summarized as follows:

1. Most faculty who support distance education emphasize accessibility values, while those opposed think of university education in elite terms (Trow, 1973). The

opponents believe that the quality of the educational process depends upon a high level of student/faculty and student/student interaction which is best provided on campus.

2. The academic program approval process acts as a restraining force in the growth and development of distance education because academic governance allows for the participation of faculty who are not involved in distance education to still be involved in decision-making.

3. Faculty who are opposed to distance education may listen to the views of respected colleagues in their discipline (as the innovation literature suggests), and may be persuaded by their colleagues to try new technologies (Black, 1992).

Black's observations regarding the participation of a mixture of supportive, opposed, and undecided faculty members in the process of academic decision-making in the area of distance education, and the potential barriers to program growth associated with faculty governance, provide some direction for examining related decision-making processes as part of the current study. There is an obvious connection between Black's observations and the potential that change leaders may have to use political or governance strategies to encourage growth in distance education.

Lape and Hart (1997) have recently conducted a study to examine the differences in levels of awareness of distance education among key community college leadership groups. The population for this study was a selected group of leaders from 29 community colleges in the state of Michigan.

A survey questionnaire was sent to the president, chief financial officer, media services director, dean of liberal studies, and chair of the social science division at each community college. These five groups were identified as representative of the key leadership positions in the community college system based on a review of distance

education literature. A total of 145 surveys were distributed, and they generated 116 responses (80% response) from 27 community colleges. Statistical analysis of the data focused on multiple comparison procedures to determine how the mean responses for the five leadership groups differed (Lape & Hart, 1997, p. 16).

Questions used in this survey examined the perceptions held by community college leaders concerning: (a) planning for distance education, (b) curricular issues in distance education, and (c) the cost-effectiveness and efficiency of distance education. These three areas were studied because the literature suggests that distance education will more likely be adopted if it is perceived to be compatible with the college mission, and considered effective from both an academic and cost perspective (e.g., Dillon, 1989; Duning, Van Kekerix, and Zaborowski, 1993).

The findings from the Lape and Hart study that appear most relevant to this dissertation may be summarized as follows:

1. The opinions of social science division chairs (who were assumed in this study to be the leadership group most representative of faculty members) often differed from the other leadership groups. The division chairs differed significantly from the other groups in rating distance education's compatibility with their college's mission.

2. Leaders' opinions concerning the need for distance education are most often not based upon any known market analysis or supporting information.

3. Distance education requires incentives for faculty participation, and faculty participation requires substantial time commitment.

4. A majority of community college leaders believe that distance education is cost-effective, that assessments of cost-effectiveness must include an examination of program

benefits, and that valid comparisons between the costs of campus and distance education can be made (Lape & Hart, 1997, pp. 17-21).

While the findings of the Lape and Hart study include some provocative points, the selection of social science division chairs to represent the views of community college faculty members may be suspect. The only rationale which the researchers offer for this selection appears to be that "social sciences is a requirement for most degree programs" (Lape & Hart, 1997, p. 16). This rationale seems inadequate considering the importance which the study places on comparing mean responses for this group with the responses of more clearly defined leadership groups. Nevertheless, there appears to be some merit in identifying and studying a number of campus leaders in order to compare their perceptions of distance education and organizational culture with the perceptions of a faculty group. The research design for the current study includes a survey of selected campus leaders as well as a survey of faculty members offering distance education courses through the SUNY Learning Network consortium. Structured interviews conducted on six SUNY campuses have also included both administrators and faculty.

Collaboration in Distance Education

During times of rapid change in their external environment, and especially when institutional resources are considered insufficient to respond to environmental factors considered threatening to institutional success or survival, America's colleges and universities have shown significant interest in inter-institutional collaboration. Distance education appears to be one of the most active areas of inter-institutional collaboration in American higher education today, and this study offers an excellent opportunity to explore the possible effects that institutional membership in a distance education consortium may have upon faculty participation in distance education.

Michael Neil has offered one definition of inter-institutional collaboration, indicating that it is "an active working partnership supported by some kind of institutional commitment", and based on formal agreement between two or more organizations (Neil, 1981, p. 25). Distance education consortia are groupings of educational and other structures constituted for the organization of distance education. They may bring together universities or university departments, government agencies, business organizations, and media production authorities for the purpose of enrolling students in distance education courses (Keegan, 1996, p.139). Distance education consortia are built around a shared desire to increase inter-institutional collaboration in order to achieve identifiable goals or obtain identifiable benefits. Konrad and Small (1986) argue that such partnerships may indeed become essential to the continued existence of distance education institutions faced with escalating costs and diminishing resources.

Examples of research studies pertaining to distance education consortia in the United States are few, but would include Michael Offerman's study of three failed American consortia (Offerman, n.d.), as well as case studies conducted by McNeil (1993) covering the University of Mid-America, and Davis (1995) covering the National Technological University. A much larger number of case studies have examined distance education consortia in Canada, a nation which has led the distance education field in experimenting with collaborative ventures (Moran & Mugridge, 1993).

Interest in inter-institutional collaboration has prompted some attention in the literature to its potential advantages and disadvantages. It is important to note that there is not only a potential for colleges and universities to obtain benefits from consortium membership (or from less formal collaborative arrangements), but also a potential for

failure and a related loss of institutional momentum and resources. In fact, the potential for inter-institutional collaboration to fail is likely to increase as collaborative structures become more complex (Anderson & Nelson, 1989; Croft, 1993; Moran & Mugridge, 1993). 'At this time, it appears that American higher education is still struggling to find effective models for inter-institutional collaboration in distance education (Carnevale, 2000, May 19).

A number of researchers have identified specific advantages to inter-institutional collaboration in distance education (e.g., Anderson & Nelson, 1989; Gatliff & Wendel, 1998; Konrad & Small, 1986; McGill & Johnstone, 1994; Moran, 1990; Mugridge, 1983; Neil, 1981; Pritchard & Jones, 1985). These researchers suggest that individual institutions are motivated to join distance education consortia in order to obtain specific advantages which they believe might not be available to individual institutions acting alone. In broad terms, the anticipated advantages of collaboration and consortium membership in distance education address four areas: (a) educational programming, (b) faculty and staff development, (c) equipment and network development, and (d) policy development and advocacy. A closer examination of the anticipated advantages in the areas of educational programming and faculty and staff development may suggest that inter-institutional collaboration is an effective strategy for increasing faculty participation in distance education, and that collaboration is facilitated through consortium membership.

Institutions often anticipate that they can increase their capacity to develop and deliver distance education programming through consortium membership. Many believe that faculty members in their institution will benefit from sharing teaching strategies with the faculty of other member institutions. Others may focus on the potential for academic

departments to share course development costs, or to use distance education courses developed by other institutions in the delivery of their own academic programs. Cooperative course development may help to build a critical mass of scholars engaged in distance teaching. This is an important potential advantage because individual institutions may lack this critical mass in small academic departments, or during the earliest stages of faculty adoption of distance teaching techniques. Consortium members may also benefit from joint efforts to coordinate program planning. This may, for example, allow members to avoid unnecessary program duplication and competition for enrollments, or to undertake shared degree programs aimed at a specific student market.

Distance education also requires that institutions invest in faculty and staff development, since most faculty and staff members require training in the use of distance education technologies before they are able to participate. Institutions often anticipate that consortium membership will allow for the sharing of training resources and costs. Members may, for example, plan to conduct consortium-sponsored training workshops or produce training materials for common use.

This literature review has included a brief examination of the literature pertaining to collaboration and consortium membership in distance education to provide a context for further examination of the effects that consortium membership may have on faculty participation. The colleges selected for this study are current members of a distance education consortium, and a review of the literature indicates that the anticipated benefits of consortium membership may include benefits related to faculty participation and linkage strategies.

Chapter III

Theoretical Framework

Distance education is an applied field which may be studied from the perspectives of a variety of theoretical frameworks. Researchers interested in developing a better understanding of the factors associated with faculty participation and program growth in distance education can find several theoretical frameworks which may be applied to this area of study. A review of distance education literature suggests that theories developed to examine and describe organizational change strategies and the diffusion of academic innovations can provide an important means for understanding how and why distance education programs are growing in American colleges and universities as faculty participation in this new type of instruction increases.

Lewin (1953) theorized that the organizational change process involves a dynamic balance of positive and negative forces operating within a social/psychological context. According to Lewin, the context for organizational change includes factors that contribute to the realization of change (driving forces) and factors that inhibit the realization of change (restraining forces). These competing forces can be found in the organization's macro-environment or task environment, and they tend to move toward a state of equilibrium in which the sum of driving forces and sum of restraining forces offset each other. Pressure for organizational change exists when the forces driving change outweigh those restraining change. The resulting imbalance in the system "unfreezes" the status quo, and organizational change follows until the restraining forces again balance the driving ones.

Lewin outlined three basic strategies for altering the existing pattern of behavior in organizations: (a) increase the driving forces, (b) decrease the restraining forces, or (c) use a combination which applies both strategies. His conclusion was that change agents can provide the optimum conditions for organizational change by capitalizing on existing

driving forces (e.g., dissatisfaction with the status quo) while at the same time acting to reduce the forces restraining change (Lewin, 1953, pp. 156-158).

Theoretical frameworks developed by Rogers (1983) to explain the adoption and diffusion of innovations, and by Lindquist (1978) to identify critical factors in the process of planned organizational change, have been used in several studies examining faculty participation in distance education and faculty issues in this area. Dillon and Walsh (1992) completed a particularly valuable and comprehensive review of existing studies dealing with faculty issues in distance education, in which they applied the theoretical frameworks developed earlier by Rogers and Lindquist to an analysis and synthesis of the findings in 24 separate studies of these issues.

The theoretical framework for this study centers around an assumption that the growth of distance education programs in American colleges and universities can be encouraged through identifiable institutional strategies dealing with academic innovation and the process of planned organizational change. Sustainable growth in distance education programs will require a high level of faculty participation, as well as the eventual acceptance of distance education as one of the primary or core activities of higher education organizations. Effective strategies will take the dynamics of academic culture and faculty motivation into account and attempt to create a positive environment for faculty participation.

This study examines the general proposition that colleges and universities that deal more effectively with key issues surrounding faculty participation in distance education will demonstrate greater faculty participation than those that deal with these issues less effectively. This suggests that an institution seeking growth in its distance education programming, or hoping to stimulate more rapid growth, must develop action strategies and an effective planned change process for encouraging the adoption and diffusion of distance education innovations, and must establish an environment which is conducive to

faculty participation. The theoretical frameworks developed by Rogers (1983) and Lindquist (1978) can provide an excellent basis for this type of study.

A review of related research literature included in Chapter II examines the theoretical models developed by Rogers (1983) and Lindquist (1978) in some detail. A brief review of the key theoretical concepts involved in these models is provided here to introduce the theoretical framework used in conducting the current case study.

Key Theoretical Concepts from Rogers

Rogers' (1983) theory of innovation diffusion suggests that the presence or absence of five general characteristics can predict the likelihood of an innovation being adopted by the members of a social system, as well as how quickly or slowly the innovation will be adopted. According to Rogers, innovations are adopted most easily and quickly when potential adopters believe:

1. The innovation offers greater advantages than the idea or technology it seeks to replace (relative advantage factor).

2. The innovation is compatible with existing values, needs, and experiences at both an individual and organizational level (compatibility factor).

3. The innovation is simple to understand and its adoption requires few new skills (complexity factor).

4. The innovation can be tried or tested on a limited basis before requiring a greater commitment (trailability factor).

5. The results or benefits of the innovation are easily evaluated and visible to others (observability factor).

If we accept the premise that these five characteristics – perceived relative advantage, compatibility, complexity, trialability, and observability - can affect the rate of adoption and diffusion of innovations in higher education, then it would make sense for colleges and universities interested in encouraging faculty participation in distance education to devote substantial effort to: (a) examine which of these characteristics are

currently associated with their distance education programs, (b) develop and implement strategies to ensure that faculty have personal experience with distance education and understand it, and (c) make appropriate adaptations in their distance education programs to fit faculty needs and values.

A second widely recognized framework developed by Rogers suggests that individuals in a social system will not all adopt an innovation at the same time. Rather, they adopt in a time sequence, and they can be classified into adopter categories based upon how quickly they first begin using a new idea. Rogers suggests a normal distribution of adopters exists, and can be divided into five categories:

1. Innovators are venturesome and able to cope with a high degree of uncertainty about innovation. They make up an estimated 2.5% of the population.

2. Early Adopters are respected opinion leaders who are among the earliest to test an innovation and communicate its characteristics to others. They make up an estimated 13.5% of the population.

3. Early Majority members adopt new ideas just before the average member of the social system. They take some amount of time to examine an innovation before adopting it, and they make up an estimated 34% of the population.

4. Late Majority members require some amount of pressure before adopting a new idea and will take longer than the average time. They make up an estimated 34% of the population.

5. Laggards are the last to adopt an innovation. They tend to be suspicious of innovations, and make up an estimated 16% of the population (1983, pp. 241 - 250).

The relevance of these adopter categories in the context of distance education is that a college or university seeking to introduce or expand its distance education program must initially focus its efforts on identifying and engaging the innovators and early adopters found within the organization. These are the people who will struggle to

overcome the uncertainties involved in initiating this new type of education. Without them, a distance education program will almost certainly fail to survive.

Key Theoretical Concepts from Lindquist

Lindquist (1978) combined key elements from a number of existing theories describing innovation diffusion and organizational change (including Lewin and Rogers) and developed an integrative model aimed specifically at advancing the study of innovation and change within the context of higher education. The "adaptive development" model proposed by Lindquist identifies five requirements for the successful adoption of academic innovations through a process of planned organizational change. This model suggests that:

1. The organizational change process must develop a linkage that brings potential adopters and campus opinion leaders into contact with members of other groups, departments, or institutions to share information, perspectives, and ideas related to the proposed innovation (linkage factor).

2. Change leaders must establish an environment that emphasizes open communication by actively seeking and considering a variety of alternative opinions concerning the proposed innovation (openness factor).

3. Change leaders must exhibit a leadership approach that initiates change activities, guides and supports a planned change process, and involves others in collaborative decision-making. Traditional leadership roles as expert and authority must be combined with newer roles as collaborator and facilitator to achieve optimal effectiveness in leading organizational change (leadership factor).

4. The organizational change process must ensure that potential adopters (e.g., faculty) develop a sense of ownership in the decision to implement a proposed innovation (ownership factor).

5. The organization must provide material and psychic rewards for those who participate in the organizational change process and for those who choose to adopt the proposed innovation (rewards factor).

The key distinction between the theoretical frameworks proposed by Rogers and Lindquist is quite simple. Rogers seeks to establish a relationship between certain "attribute characteristics" of proposed innovations and their rate of adoption and diffusion. His focus is on the nature of the proposed innovation and the characteristics which potential adopters associate with its related activities or technologies. In Rogers' view, the successful adoption and diffusion of an innovation depends most heavily upon how potential adopters come to understand it, and how it compares with existing values, needs, experiences, and organizational structures.

In contrast, Lindquist seeks to establish a relationship between certain "process characteristics" and the rate of innovation adoption and diffusion. His focus is on the organizational process and strategies used to encourage the adoption and diffusion of academic innovations within specific institutions. He proposes that successful adoption and diffusion depends most heavily upon the type of process and strategies used by organizational change leaders to encourage acceptance of the proposed innovation.

While the Rogers and Lindquist frameworks differ somewhat in their approach to explaining the adoption and diffusion of innovations, they also share some common elements. Both frameworks recognize that the potential adopters of an innovation (e.g., distance teaching) must somehow come to understand the innovation and accept it, and both suggest that this is accomplished primarily through social interaction with others who have more experience with the innovation. Lindquist acknowledges that Rogers is most frequently identified with the school of thought suggesting that social interaction is essential to planned change, based on the belief that new ideas are communicated and validated through social networks (1978, p. 4).

This conceptual connection between Rogers and Lindquist is most evident in Lindquist's examination of the "linkage factor" in planned change processes. Linkage suggests that once a person, group, or organization has identified a need for change to solve a particular problem, that they begin a search for solutions through internal and external consultation. Most often, there is an external resource system of other persons or organizations that may be trying to solve a similar problem. Lindquist proposes that the best chances for finding an appropriate solution come from linking the broader expertise and experience of the external system with the specific local needs and circumstances of the internal system. General models or solutions developed by outsiders often do not fit with local needs and circumstances, but they can often be adapted to fit the local problem. This consultation and adaptation process can lead to a more adequate solution than one which is developed without external consultation (1978, pp. 9-12).

In essence, the linkage process described by Lindquist focuses on the use of external expertise and consultation to help potential adopters learn about the complexity, trialability, and observability of a proposed innovation. Once this learning process has been accomplished, potential adopters are better prepared to determine whether or not the proposed innovation offers relative advantages, how it might fit with existing needs, values and organizational structures, and whether or not they should proceed with adoption. This suggests that the strategies used in planned change processes to encourage linkage could have a positive effect on how faculty adopters perceive the attribute characteristics of distance education innovations. That is, faculty may have more positive perceptions of distance education technologies and pedagogies following planned interactions with external experts or other users. Positive faculty perceptions surrounding these characteristics would in turn suggest that distance education innovations could be adopted more rapidly.

The diagram presented in Figure 1 may be helpful in portraying the interaction of attribute characteristics and process characteristics within this theoretical framework, as

well as the independent effect that each of these variables may have on faculty participation in distance education. As indicated, these variables come into play within a larger organizational context and academic culture which must also be taken into account.

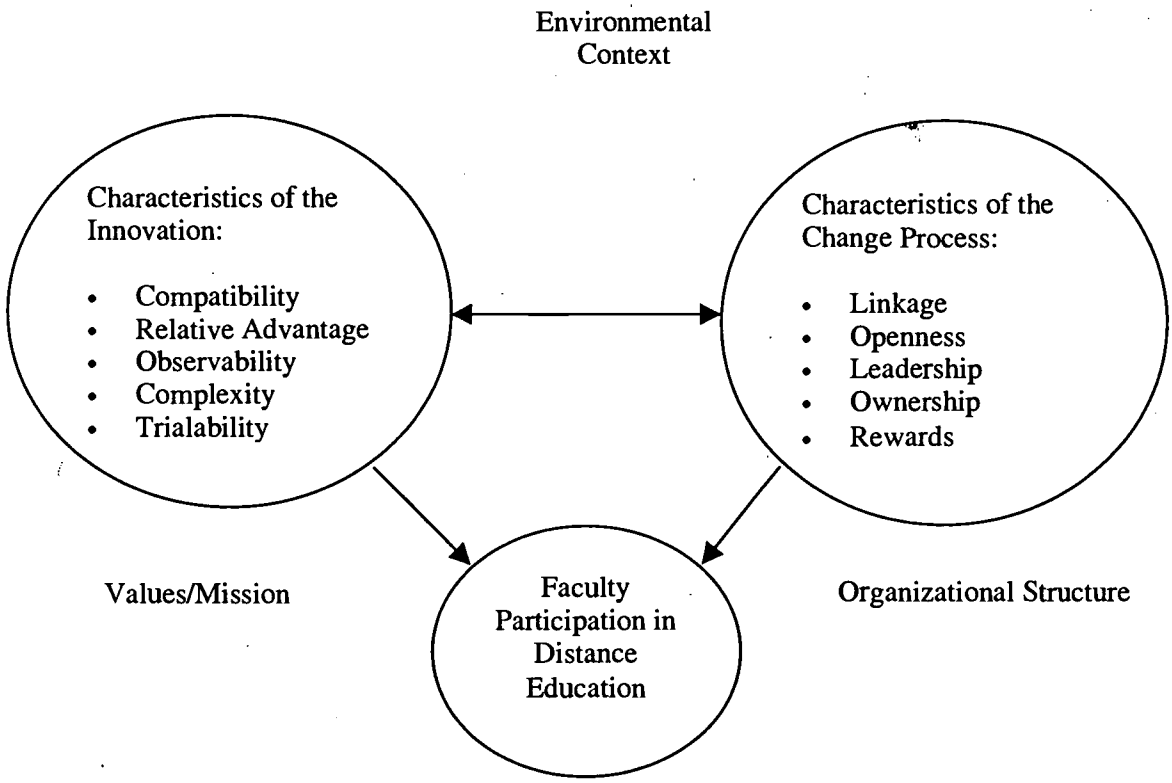

Figure 1. A Theoretical Framework for the Study of Faculty Participation in Distance Education.

In summary, the theoretical framework chosen for this study integrates concepts from Rogers (1983) and Lindquist (1978) and suggests that the adoption and diffusion of distance education innovations in colleges and universities may be examined most effectively from two perspectives: (a) examination of the attribute characteristics of the specific distance education technologies and pedagogies used, and (b) examination of the processes and strategies used to encourage the adoption and diffusion of distance education within specific institutions or types of institutions. This integrated framework further suggests that the adoption and diffusion of distance education innovations will occur most rapidly when: (a) the proposed distance education technologies and pedagogies demonstrate attribute characteristics that faculty find most acceptable, and (b) academic change leaders employ effective strategies in a process aimed at increasing the incentives and reducing the barriers associated with faculty participation. Effective strategies will take the dynamics of academic culture and faculty motivation into account and attempt to create a positive environment for faculty participation.

Theoretical Propositions

The review and critique of related research literature conducted in Chapter II provides a basis for the development of a number of theoretical propositions which can be used to apply the chosen theoretical framework to a study of faculty participation in distance education. The eight theoretical propositions that follow have been developed to test the application of this framework in a comparative case study of the adoption and diffusion of Internet-based distance education by faculty employed at 31 member institutions in the SUNY Learning Network consortium. The description of each proposition includes selected references to earlier distance education studies which provide some amount of evidence to support the validity of that particular proposition:

Proposition 1 – Compatibility

Faculty participation in distance education is encouraged when they believe it is compatible with their college/university mission and fits existing needs, values, and organizational structures (Bankirer, 1987; Black, 1992; Clark, 1993; Dillon, 1989; Dillon & Walsh, 1992; Evans & Leppmann, 1967; Lape & Hart, 1997; Olcott, 1994; Parisot, 1997; Rogers, 1983; Wolcott & Haderlie, 1996).

Proposition 2 - Observability and Relative Advantage

Faculty participation in distance education is encouraged when they believe it offers observable benefits and relative advantages when compared to campus-based education (Clark, 1993; Evans & Leppmann, 1967; Olcott, 1994; Parisot, 1967; Rogers, 1983).

Proposition 3 – Complexity and Trialability

Faculty participation in distance education is encouraged when the technologies and pedagogies used are easy to understand and can be tried on a limited basis before further adoption (Dillon & Walsh, 1992; Evans & Leppmann, 1967; Olcott, 1994; Parisot, 1997; Rogers, 1993).

Proposition 4 – Linkage

Faculty participation in distance education is encouraged when academic leaders implement strategies to increase faculty familiarity with the technologies and pedagogies required for distance teaching (Black, 1992; Clark, 1993; Lindquist, 1974, 1978; Olcott, 1994; Parisot, 1997).

Proposition 5 – Ownership

Faculty participation in distance education is encouraged when they believe that distance education programs have been developed and implemented with their active involvement

and support (Bankirer, 1987; Dillon & Walsh, 1992; Evans & Leppmann, 1967; Lindquist, 1978; Olcott, 1994, Parisot, 1997; Stinehart, 1988).

Proposition 6 – Leadership and Openness

Faculty participation in distance education is encouraged when academic leaders initiate and guide a planned change process, involve faculty in collaborative decision-making, and provide the resources required to support high quality instruction and administrative services (Bankirer, 1987; Chaffee & Tierney 1988; Dillon & Walsh, 1992; Lindquist, 1978; Olcott, 1994; Parisot, 1997; Wolcott, 1997).

Proposition 7 – Rewards

Faculty participation in distance education is encouraged when academic leaders provide faculty with material and psychic rewards equal to or greater than those provided for campus-based education (Bankirer, 1987; Lape & Hart, 1997; Lindquist, 1978; Olcott, 1994; Parisot, 1997; Wolcott, 1997a, 1997b; Wolcott & Haderlie, 1996).

Proposition 8 – Inter-Institutional Collaboration

Faculty participation in distance education is encouraged when academic leaders use distance education partnerships or consortia to provide increased resources for faculty development, instructional technologies and support services (Anderson & Nelson, 1989; Clark, 1993; Gatliff & Wendel, 1998; Keegan, 1996; Konrad & Small, 1986; McGill & Johnstone, 1994; Moran, 1990; McGridge, 1983; Neil, 1981; Pritchard & Jones, 1985).

The first three of these propositions relate to the possible effects which specific attribute characteristics of Internet-based distance education may have on faculty decisions to engage in distance teaching using these technologies and pedagogies. The current case study of SUNY Learning Network institutions includes quantitative and qualitative data collected from faculty and administrators to determine the perceptions

they have regarding the prevalence of these characteristics and how they may act to encourage or discourage faculty participation in distance education.

The five remaining propositions (numbers 4-8) relate to the possible effects which specific types of planned change strategies may have on faculty participation in distance education. Academic leaders choose specific strategies to encourage faculty participation, and the current case study of SUNY Learning Network institutions includes quantitative and qualitative data collected from faculty and administrators to determine the prevalence and perceived effectiveness of a variety of institutional strategies, including the use of distance education partnerships or consortia.

Chapter IV

Research Methodology

Four principal objectives have been identified for this study (see p. 4):

1. To examine how existing theories of innovation diffusion and planned organizational change may provide a framework for the development and evaluation of institutional strategies to encourage faculty participation in distance education.

2. To identify and describe the strategies currently employed by a group of state-supported colleges and universities to encourage faculty participation in distance education.

3. To illustrate the effects that specific strategies or types of strategies may have on increasing faculty participation in distance education through a comparative case study of the selected institutions.

4. To examine specifically the effects that institutional membership in a distance education consortium may have on faculty participation in teaching Internet-based distance education courses.

This chapter outlines the methodology used to attempt to answer these questions. The study was designed to develop and test a number of theoretical propositions that could be used to guide the future development and evaluation of institutional strategies aimed at increasing faculty participation in distance education programs.

The research methodology used in conducting this study was based primarily in a comparative case study approach. One of the major advantages of this approach is that it encourages the researcher to employ a combination of quantitative and qualitative methods in data collection, and to explore the convergence of these separate types of data

during data analysis (Yin, 1994). This was accomplished in this study through the use of a two-phase research design with a descriptive survey component followed by a qualitative interview component. The research design and methods used in the study are described in greater detail in the following sections. The result is a holistic study which tests the theoretical propositions developed in Chapter III within the context of 31 SUNY Learning Network institutions.

The dependent variable under examination in this study is faculty participation in distance education. Faculty participation is defined, for the purposes of this study, as involvement in teaching one or more college-level distance education courses using a specific Internet-based communication technology for asynchronous course delivery. This technology is used by the member colleges and universities of the SUNY Learning Network to offer distance education courses sponsored by the consortium. The study identifies two measures of faculty participation for each of the institutions included in the study: (a) the number of Internet-based distance education courses offered by each institution through the SUNY Learning Network during the 1998-99 and 1999-2000 academic years, and (b) the number of faculty teaching these courses. These two measures provide the basis for a comparative examination of growth in faculty participation at the institutions studied.

Selection of Institutions for the Study

The SUNY Learning Network is a consortium of colleges and universities in the State University of New York (SUNY) system who have affiliated under the sponsorship of the SUNY central administration's Office of Advanced Learning and Information Services for the purpose of offering Internet-based distance education courses through a shared technological and administrative infrastructure. The consortium included 36

member institutions during the 1998-99 academic year. This academic year was selected as the base year for a two-year longitudinal study of the factors associated with faculty participation in distance education.

Thirty-one of the consortium's 36 member institutions were selected to be included in this study, and five were excluded. The five excluded institutions are two-year level colleges of agriculture and technology that are members of a group called the "United Colleges of Technology". These five campuses share a variety of academic and administrative functions, including a group effort to offer distance education courses through the SUNY Learning Network. The decision to exclude these five institutions from the study was based on the methodological problems presented by their shared administrative structure, including difficulties in determining which of the five campuses were providing participating faculty, and who was responsible for the administration of the group's distance education activities.

The 31 member institutions included in the study represent a variety of institutional types. The official classifications of these institutions within the SUNY system are as follows:

1. University Centers focus on research and advanced graduate and professional studies in addition to undergraduate programs. There are four University Centers in the SUNY system conferring baccalaureate, master's, doctoral, and first professional degrees, and all four were member institutions in the SUNY Learning Network during the two-year period of this study.

2. University Colleges focus on undergraduate instruction and offer academic programs through the master's degree level in a wide variety of liberal arts and professional disciplines. There are 13 University Colleges in the SUNY system and

seven of these were members in the SUNY Learning Network during the two-year period of this study. This SUNY classification includes Empire State College, an institution that differs greatly from the other University Colleges in terms of organizational structure and mission. Data from Empire State College faculty and administrators are included in this study, but these data are analyzed separately from the data collected from other University Colleges in most instances.

3. Community Colleges focus on continuing education and two-year degree programs preparing graduates for job-entry or transfer to a baccalaureate level program. There are 30 locally-sponsored Community Colleges in the SUNY system, and 16 of these colleges were members in the SUNY Learning Network during the two-year period of this study.

4. Specialized Colleges in the SUNY system offer a highly specialized curriculum as their distinguishing feature. Five SUNY institutions have been designated Specialized Colleges. Three of these institutions have been included in this study due to their membership in the SUNY Learning Network during the 1998-99 and 1999-2000 academic years, and all three members are four-year residential colleges.

The SUNY College of Environmental Science and Forestry is a Specialized College offering undergraduate upper division level and graduate level programs focusing on environmental fields of study. The SUNY Institute of Technology at Utica/Rome is the only all-transfer college in the State University, and focuses on baccalaureate and master's degree programs in technology and allied health areas. The SUNY College of Technology at Farmingdale was a residential two-year institution until 1993 when it added baccalaureate level programs to its career-oriented curriculum.

5. Statutory Colleges are publicly-supported specialized institutions that are located on the campuses of two private universities in the State. One of these Statutory Colleges, the New York State College of Ceramics at Alfred University, was a member institution in the SUNY Learning Network during the two-year period of this study. The College of Ceramics offers baccalaureate, master's, and doctoral level programs focusing on art, design, and ceramic engineering. It is a small residential college.

For purposes of data analysis in this study, a decision has been made to include the three SUNY institutions classified as Specialized Colleges and the single Statutory College member as part of a larger group of four-year residential campuses that includes the University Centers and six University Colleges. This is a reasonable step because these Specialized and Statutory institutions share a number of characteristics with the institutions found in the University Colleges classification. They are residential campuses, relatively small in terms of enrollment, and focused primarily on baccalaureate and master's degree programs and instruction, with research efforts that are relatively limited.

Survey Component of the Study

The first phase of the study used a printed survey mailing with an Internet (web-based) survey option to collect descriptive and attitudinal data from faculty members and administrators employed at 31 colleges and universities that were members of the SUNY Learning Network distance education consortium during the period of the study.

Two survey instruments were designed specifically for this study, with one developed to fit the targeted faculty population and a slightly different one to fit the college administrators selected for the study. These instruments were developed in both a printed format and an Internet (web-based) format to maximize potential response.

Significant parts of the survey instruments (specifically those dealing with program goals and barriers to faculty participation) were patterned after a national survey conducted earlier by the U.S. Department of Education (1997). Field testing of the instruments was completed in August and early September 1999. Improvements suggested by four SUNY administrators and two SUNY Learning Network faculty were incorporated in the final versions of each instrument prior to mailing. A sample copy of each survey instrument is included in Appendix A. Web-based versions of the instruments may be reviewed on the Internet at http://www.frontiernet.net/~rfrench/survey1.htm (faculty survey) and http://www.frontiernet.net/~rfrench/survey2.htm (administrator survey).

Identification and Selection of Sample Populations

The desired sample population of faculty members for this study was the full population of 245 faculty who offered one or more distance education courses through the SUNY Learning Network during the Fall 1998 or Spring 1999 semesters, and who were employed at one of the 31 consortium member institutions selected for the study. This full population included 130 faculty employed at two-year institutions and 115 employed at four-year institutions.

Faculty selected to participate in the study were identified through a review of course and faculty listings provided in the Fall 1998 and Spring 1999 Course Guide publications produced by the consortium, as well as similar listings available on the SUNY Learning Network web site. The review of these sources produced usable mailing addresses for 233 faculty members, and these were used as the sample population for the faculty component of the study (n = 233). This sample population included 127 faculty employed at two-year institutions and 106 faculty employed at four-year institutions, and can be assumed to be highly representative of the full population.

The survey was also administered to a sample population of 100 college and university administrators employed at the 31 institutions in the study. These administrators were selected using a purposeful sampling technique (Bogdan & Biklen, 1992; Maykut & Morehouse, 1994) to include individuals representing three groups of academic leaders involved in the management of distance education programs. These three leadership groups can be described as follows:

1. The president of each of the 31 consortium member institutions was selected due to the important role which college presidents play in the development and implementation of institutional goals and policies involving distance education.

2. The vice president for academic affairs (or equivalent chief academic officer) at each of the 31 consortium member institutions was selected due to the important role which chief academic officers play in the development and implementation of institutional goals and policies involving academic program development, faculty development, and distance education.

3. One to two additional administrators from each campus were selected based upon their direct involvement in the administration of the SUNY Learning Network program offered by their college or university. A total of 38 of these administrators were identified through an examination of SUNY Learning Network Course Guide publications and campus web sites developed by the participating institutions, and were determined to be appropriate representatives of this third group of academic leaders. Thirty of these administrators (79% of the group) held leadership positions in distance learning or continuing education units. Three were school or college deans, and five held other positions in academic administration (e.g., registration, advising, or library) in which they provided support services to SUNY Learning Network students.

Of the 100 college and university administrators selected for this sample, 51 were employed at two-year institutions and 49 were employed at four-year institutions. These numbers were meant to reflect the classifications of the participating colleges, since 52% of the consortium members were two-year and 48% were four-year institutions.

Administration of the Survey

The survey instrument was mailed to the sample faculty and administrator populations in September 1999, along with a cover letter from the researcher, an Informed Consent Form, and a postage-paid and addressed return envelope (see Appendix A). The cover letter accompanying each survey encouraged participants to visit an on-line survey web site and to respond through that site if they preferred to respond electronically. The cover letter also indicated that participants responding electronically would gain immediate access to an on-line summary of responses provided by other survey participants, once their own response had been submitted.

Surveys were mailed to campus addresses collected from Fall 1998 and Spring 1999 SUNY Learning Network Course Guide publications and campus web directories. It is assumed that all survey mailings were delivered. A search of campus web directories was also used to collect electronic mail addresses for the sample populations. Deliverable e-mail addresses were found for 179 of the 233 faculty members (76.8%), and 83 of the 100 administrators (83.0%) in the sample populations. The researcher mailed a second survey request to non-responding faculty and administrators through electronic mail sent two weeks after the original hard copy mailing of the survey. This second request encouraged on-line completion of the survey instrument.

Survey Response

A total of 75 faculty members from the sample population of 233 returned usable survey instruments in either a paper or electronic format, for a 32.2% response rate. The response rate for Community College faculty was 32.3%; the response rate for Empire State College faculty was 32.5%; and the response rate for faculty employed at four-year residential institutions was 31.8% overall. Approximately two-thirds (63.5%) of the faculty responding to the survey returned the paper version, and one-third (36.5%) responded on-line. Faculty members responding to the survey were highly representative of the total population of faculty teaching in the SUNY Learning Network in terms of their institutional classification. Of the 245 faculty teaching on-line at the selected consortium member institutions during the 1998-99 academic year, 53.1% were employed at Community Colleges, 19.6% at Empire State College, and 27.3% at four-year residential campuses. Of the 75 faculty members responding to the survey, 54.7% were employed at Community Colleges, 17.3% at Empire State College, and 28.0% at four-year residential campuses.

A total of 43 administrators from the sample population of 100 returned usable survey instruments, representing a 43.0% response rate. The response rate for Community College administrators was 47.1% (24 of 51) and the response rate for administrators employed at four-year institutions (including Empire State College) was 38.8% (19 of 49). The responding group of administrators included eight college presidents, 14 chief academic officers, 13 distance education or continuing education administrators, and eight other administrators involved directly with the SUNY Learning Network program on their campus (including three college deans). A comparison of the 43 responding administrators with the purposeful sample of 100 contacted for the study would indicate that college presidents were underrepresented in the response group

(18.6% versus 31.0% of the sample) while the other types of administrators were well represented. The intent of the purposeful sample was to gather data from a group of administrators who were knowledgeable and experienced in the management of SUNY Learning Network programs, and it is very likely that the response group achieves this purpose.

Qualitative Research Component of the Study

The second phase of this study involved the collection and analysis of qualitative data taken from personal interviews with 30 faculty and administrators employed at six of the consortium member institutions and the Office of Advanced Learning and Information Services in the SUNY central administration. These interviews were conducted to add a more detailed dimension to the perceptions and observations collected during the initial survey phase of the study, and to further explore the organizational structures, environments, and values found in a sample of the participating institutions.

Purposeful Sampling Procedure

Stake (1994) uses the term collective case study to describe a research design which studies a number of cases jointly. Individual cases (e.g., colleges or universities) in the collection may or may not be known in advance to manifest the phenomenon or characteristics under study. They may be similar or dissimilar cases. The individual cases are chosen because the researcher believes that understanding them will lead to better understanding, and perhaps better theorizing, about some larger number of cases.

A purposeful sampling procedure (Bogdan & Bicklen, 1992; Maykut & Morehouse, 1994) is often used in qualitative research to select participants or settings (such as schools) for inclusion in a study based on the possibility that each participant or setting will expand the variability of the sample. The selection of six member institutions to be

included in the qualitative research phase of this study was accomplished through a purposeful sampling procedure that focused on: (a) selecting two institutions from each of the three dominant classifications or types of institutions found within the SUNY system, (b) selecting institutions within each classification that had achieved relatively higher levels of faculty participation in distance education, and (c) selecting institutions that had significant numbers of faculty and administrators responding in the survey phase of the study. This procedure provided an opportunity for comparing the findings from three different institutional classifications while also providing a sufficiently large population of distance education faculty and administrators to allow for a meaningful number of interview participants on each campus. The procedure assumed that institutions which exhibited higher levels of faculty participation in distance education would have likely developed the most effective strategies and climate for encouraging participation, and would likely provide the best opportunities for exploring these areas. Faculty data used for the purposeful sampling procedure were taken from SUNY Learning Network Course Guides for 1998-99 and 1999-2000.

This purposeful sampling procedure led to the selection of the following six institutions for further exploration in the qualitative research phase of the study:

1. Binghamton University (University Center)
2. University at Buffalo (University Center)
3. SUNY Fredonia (University College)
4. SUNY Oswego (University College)
5. Monroe Community College
6. Tompkins-Cortland Community College

Faculty members and administrators from these six campuses who responded during the initial survey phase of the study were contacted by telephone and/or electronic mail and invited to participate in the qualitative interview phase. A total of 15 faculty members and 14 administrators were interviewed on the six campuses and these interviews provided more than 30 hours of narrative data for analysis. Six faculty and five administrators interviewed were employed at Community Colleges. Nine faculty and nine administrators interviewed were employed at the two University Colleges or two University Centers selected for further study.

An additional visit was made to the SUNY Office of Advanced Learning and Information Services, where an extensive interview was conducted with the state system's Assistant Provost for Advanced Learning Technology. This interview helped to provide an important additional perspective on the SLN consortium's strategies for encouraging faculty participation, and the variety of relationships that exist currently between the central administration and faculty and administrators at the member institutions.

Qualitative Research Methods

In-person visits were conducted for data gathering purposes at the Office of Advanced Learning and Information Services in Albany, New York, and at the six institutions selected for this component of the study. These visits took place during the Fall 1999 and Spring 2000 semesters, and were focused on two primary forms of data collection:

1. In-depth interviews were conducted with selected faculty members and college administrators. A total of 30 faculty members and administrators were interviewed and provided more than 30 hours of narrative data for analysis.

2. Faculty members and administrators were asked to assist in the identification and collection of resource documents (e.g., strategic planning documents, catalogs) that would help to provide insights into campus or system administration perspectives on the research topic.

The in-depth interviews were used to explore a series of "guiding questions" (Bogdan & Biklen, 1992) which are included as Appendix D. Interviews were tape-recorded with the participant's permission. Field notes were substituted for tape-recording of the data in one case. Interview participants were given the option of remaining anonymous in the research report, and the researcher has chosen not to identify personally the interview participants.

The qualitative component of this study demonstrates a number of additional characteristics of qualitative research, including several standard characteristics described by Maykut and Morehouse (1994):

1. The interviews had an exploratory focus. The researcher sought the opinions and perspectives of the participants through a series of open-ended questions.

2. The study used purposeful sampling in the selection of participants to increase the likelihood that a broad range of participant viewpoints would be expressed.

3. Data was collected in the natural setting. This helped the researcher to understand the context in which the participating faculty and administrators developed their views of distance education and the SUNY Learning Network.

4. The researcher acted as the instrument of data collection, and was responsible for both data collection and data analysis. This approach is based on the belief that a human researcher is the only instrument which is adaptable enough to capture the complexity of human experience (Lincoln & Guba, 1985). This approach also recognizes

and attempts to control for the effects of any biases which the researcher might bring to the activities associated with data collection or analysis.

5. The study used qualitative methods of data collection (in-depth interviewing and document analysis) to allow the researcher to capture the language and behavior of participants in the study. The qualitative data examined and analyzed in this study consists primarily of the narrations provided by the participants during interviews.

6. Analysis of the interview data was ongoing, and the outcomes of the study evolved through a process of inductive reasoning. Creswell offers a particularly clear explanation of the use of inductive research in a qualitative study (1994, pp. 93-101), and his work was used to guide the qualitative data analysis.

7. A case study approach provided the basis for the research design. Yin (1994) describes how a case study approach can allow the researcher to deal with a full range of evidence (e.g., documents, interviews, survey data, observations) in a way which can be most helpful in appreciating the complexity of a contemporary set of events or phenomena. The goal of the qualitative component of this study was to produce a descriptive analysis of the factors encouraging faculty participation in distance education programs at the selected institutions. This included an analysis of distance education activities and policies which developed within the context of each institution's unique organizational culture, and the role that consortium membership had on those activities and policies.

Limitations of the Study

The limitations of the methodology used to conduct this study center around the unique attributes of the individuals and institutions selected for the study:

1. The colleges and universities included in the study are all public institutions. It is possible that factors influencing faculty participation in distance education in the independent sector could vary a great deal, in keeping with possible differences in organizational culture found at independent colleges and universities.

2. The consortium member institutions included in the study are all members of an existing state system of higher education (SUNY). Some level of inter-institutional collaboration among these institutions is expected, and some history of collaboration already exists. The fact that the system supports a central administration office which is involved directly in distance education program administration and coordination may also influence the findings, since other distance education institutions may or may not include a central administrative office as part of their organizational structure.

3. Faculty members selected to participate in the study include only those who have chosen to participate in their college or university's Internet-based distance education program during its early stages of growth and development. This study may contribute to a fuller understanding of factors which influence the participation of innovators or early adopters (Rogers, 1983), but has not been designed to compare this information with faculty who have chosen not to participate in distance education. Program growth may ultimately depend upon broadening participation to include a majority of faculty members.

4. Faculty members selected to participate in the study have chosen to engage in distance teaching using a specific Internet-based technology to support asynchronous on-line instruction. The opinions of faculty who utilize other forms of distance education technology (including faculty who may be employed at the selected institutions) have not been examined in this study.

Contribution to Distance Education Research

This comparative case study has the potential to make a meaningful contribution to applied research in the areas of distance education and planned organizational change due to its several distinguishing characteristics:

1. The study offers a relatively straightforward measure of innovation adoption and diffusion through its definition of the dependent variable faculty participation in distance education. An increase or decrease in faculty participation can be connected to an observable change in the number of distance education courses offered. This variable may be studied longitudinally, beginning with the Fall 1998 semester and progressing into the future.

2. The study offers a consistent definition of distance education. This is important due to the variety of communications technologies used to provide distance education today. The faculty in the study have all used the same type of communications technology in offering their distance education courses. This simplifies the study of attribute characteristics associated with the on-line teaching innovation.

3. The study provides an opportunity to provide some measure of control over environmental or institutional variables that may affect the dependent variable. The colleges and universities in the study are all part of a single state system, and certain "institutional factors" would presumably be relatively constant (e.g., the involvement of state government, degree of fiscal stress, personnel policies, legal environment). Other institutional factors such as size and mission could presumably be studied with less "disturbance". The study includes a variety of institutional types.

4. The study provides a rare opportunity to study the possible effects that institutional membership in a distance education consortium might have on individual faculty participation. Consortium membership may be an effective strategy for establishing an effective linkage among distance education proponents spanning the normal institutional boundaries.

In summary, this study represents a unique opportunity to explore factors which encourage or inhibit faculty participation in distance education programs. A number of studies have examined factors influencing the adoption of distance education, as well as motivational factors surrounding faculty participation. No other studies have been found that examine the comparative effects of specific planned change strategies on faculty participation, or that identify strategies to encourage faculty participation in distance education programs through institutional membership in a distance education consortium.

Chapter V

The Case Study

A comparative case study of faculty participation in the distance education programs offered by 31 colleges and universities in the SUNY Learning Network consortium has provided the methodological framework and primary focus for this research. This case study used a two-phase research design with a descriptive survey component followed by a qualitative interview component. The study collected survey data from 118 faculty and administrators employed at the participating institutions, and qualitative interview data from 30 faculty and administrators collected during site visits to six SUNY campuses and the SUNY Office of Advanced Learning Services.

This chapter presents the study's findings in three related areas: (a) background information describing the SUNY Learning Network, (b) a comparative examination of the growth in faculty participation in on-line teaching at the consortium member institutions, and (c) a description of institutional goals for distance education and assessment of goal attainment through the consortium.

Background Information

The SUNY Learning Network began as a regional project in the mid-Hudson Valley involving eight SUNY campuses. The program offered its first four courses on-line during the Fall 1995 semester and enrolled 56 students at that time. Growth in the number of participating campuses and faculty teaching on-line courses has been dramatic in recent years. By the 1998-99 academic year, consortium membership had grown to 36

SUNY campuses, and the member institutions offered more than 400 courses on-line (SUNY Learning Network Website, February 18, 2000). The 1998-99 academic year has been selected as the "base year" for this two-year longitudinal study of the factors associated with faculty participation in distance education.

The SUNY system administration's Office of Advanced Learning Services (OALS) has played a central role in coordinating the on-line distance education efforts of the consortium institutions. This office has developed and operated the technical infrastructure of computer systems and course management software that supports the consortium's asynchronous learning network, and has built common software applications and processes that help ensure a level of consistency for on-line students from the different campuses. Beyond that, this central office provides an extensive faculty training program (required for all participating faculty), conducts general marketing activities aimed at increasing awareness of SUNY distance learning opportunities, and provides a centralized "help desk" service for users. Significant support for the consortium's activities has come from a series of grants from the Alfred P. Sloan Foundation (a total of $4.1 million), with OALS primarily responsible for generating and managing these funds (Fredericksen, 1999).

The faculty members who develop and teach on-line courses through the SUNY Learning Network are employed by the participating colleges and universities, and the majority are members of the regular full-time faculty. All have taught traditional classroom courses, and most continue to do so. The choice of faculty to teach on-line is a campus-based decision, and the rewards offered for faculty participation often vary from campus to campus. The central OALS office provides technical support for faculty, as well as professional instructional design staff to assist in course development. Initially,

the central office allocated funds from its Sloan grant to the campuses to provide some compensation to faculty in addition to laptop computers, but this is now done less frequently and individual campuses have assumed the primary responsibility for supporting their participating faculty (Fredericksen, 1999).

Students register for SUNY Learning Network courses through the campus offering the course, and pay tuition and fees to that campus. Tuition revenue, student FTE, and applicable chargebacks are retained by the campus granting course credit. Degrees are granted only through the participating campuses (not the consortium), and academic advising services are provided by the campuses. Students participate in on-line classes as a cohort, and follow the academic calendar of the campus offering the course. Student participation is asynchronous throughout the course, but it is not self-paced. Most courses require extensive on-line discussion components involving students and faculty (Feisel, 1998; Fredericksen, 1999).

Qualitative interview data collected from faculty and administrators during the case study suggests that substantial policy issues arose between the SUNY Office of Advanced Learning Services and the individual campuses during the first few years, when the consortium was growing and developing in the absence of a well-defined set of policy guidelines. Reports and policy statements produced by the President's Task Force on Distance Learning (Steiner, 1995) and the University Distance Learning Panel (Feisel, 1998), have since provided a number of guiding principles, and helped to better define the existing relationships for all parties.

Comparison of Two-Year and Four-Year Institutions

This case study offers opportunities for data analysis on both a collective and comparative level. Stake (1994) uses the term collective case study to describe a research

design which studies a number of cases jointly, and this is a collective case study in the sense that many of the findings and conclusions relate to all 31 SUNY Learning Network institutions and describe their collective experiences as members of a system-wide distance education consortium. But this is also a comparative case study that attempts to identify and explore some of the differences that can be found in the experiences and perceptions of the participating faculty members and administrators. While these differences could potentially be examined at a level that would compare the participant data for individual institutions, the number of participants on each campus make this implausible, and this study has assumed that more useful findings may be derived by comparing the data collected from a community college segment and a four-year residential campus segment of the participants.

The community college segment includes participating faculty and administrators employed by any of the 16 community colleges that were members of the SUNY Learning Network during the period of study. These community colleges focus on continuing education and two-year degree programs preparing graduates for job-entry or transfer to a baccalaureate level program. Increasing student access to higher education is a fundamental part of the community college mission, and their open enrollment policies allow admission to all students who seek it. Community college students are most often adult students studying on a part-time basis and commuting to campus. Residential living facilities are not available on these campuses.

The four-year residential campus segment includes faculty and administrators from all of the remaining colleges and universities participating in the SUNY Learning Network, with the exception of Empire State College. This segment includes four University Centers, six University Colleges, three Specialized Colleges, and one

Statutory College that all operate within the SUNY system. All of the institutions in this segment offer degree programs at the baccalaureate level or higher, and they focus on serving a student population that is most often traditional-aged, studying full-time, and residing on campus. Adult and continuing education is a comparatively minor focus for these institutions, though they may have identifiable continuing education units. Admission to these institutions is selective, and their missions are focused on a combination of research, teaching, and public service.

Empire State College is an important participant in the SUNY Learning Network, employing more faculty teaching on-line than any other member of the consortium, and offering the second largest number of on-line courses during the 1999-2000 academic year. This case study of the SUNY Learning Network would be incomplete if it were to exclude survey respondents from Empire State College, and these respondents (13 faculty and 2 administrators) have been included throughout this study whenever data from the full sample of faculty or administrators is examined. There are, however, several factors that preclude a more in-depth analysis of Empire State College within this study, and limit the practical utility of comparing this institution with others. These factors center around the unique nature of Empire State College and its special mission within SUNY. Empire State College offers a comprehensive range of undergraduate and graduate degree programs, but it is not a residential campus, and its mission is distinctly oriented toward independent study and adult and continuing education. It is difficult (perhaps impossible) to accurately place Empire State within a larger classification of SUNY institutions, and the utility of a separate data analysis for this single institution is suspect. This study has chosen to focus instead on a comparative analysis of the community college and four-year residential segments of the participating institutions.

Growth in Faculty Participation

The 31 colleges and universities in the consortium have experienced different rates of growth in faculty participation during the two-year period of study, based on an analysis of two separate measures for each institution: (a) growth in the number of SLN courses offered, and (b) growth in the number of faculty teaching one or more SLN courses during the academic year (see Table 1). The main objective of this comparative case study is to test the general efficacy of the theoretical propositions outlined in Chapter III, and to determine how helpful these propositions might be in explaining the different rates of growth in faculty participation found within the consortium. The case study also tests the general proposition that growth in faculty participation in distance education occurs most rapidly at institutions where academic leaders have employed effective strategies in a process aimed at increasing the incentives and reducing the barriers associated with participation.

The data presented in Table 1 demonstrates the variety of institutions involved in the SUNY Learning Network, and the differences that exist in the size of these on-line programs. Most of the programs are quite small at this time. It is not unusual, however, for many postsecondary institutions to offer a limited number of distance education courses while the adoption and diffusion of this innovation remains in its early stages. A study conducted by the National Center for Education Statistics indicates that 48% of the institutions offering distance education courses in 1997-98 offered 15 or fewer different courses using any type of distance education technologies (U.S. Department of Education, 1999).

The most relevant data displayed in Table 1 pertains to the SLN program's growth

Table 1

Growth in On-line Courses and Participating Faculty at 31 SUNY Learning Network Colleges and Universities, 1998-2000

	# SLN Courses Offered			#SLN Participating Faculty		
	1998-1999	1999-2000	% Growth	1998-1999	1999-2000	% Growth
Albany	10	23	+130.0	7	21	+200.0
Binghamton	13	14	+ 7.7	9	9	0.0
Buffalo	6	3	– 50.0	4	6	+ 50.0
Stony Brook	5	8	+ 60.0	4	6	+ 50.0
Subtotal University Centers	34	48	+ 41.2	24	42	+ 75.0
Cortland	6	9	+ 50.0	4	6	+ 50.0
Empire State	71	90	+ 26.8	48	64	+ 33.3
Fredonia	8	12	+ 50.0	4	4	0.0
New Paltz	13	14	+ 7.7	7	9	+ 28.6
Oneonta	2	2	0.0	1	1	0.0
Oswego	13	19	+ 46.2	6	12	+ 50.0
Purchase	3	1	– 66.7	3	1	– 66.7
Environmental Science	2	0	–100.0	1	0	–100.0
Farmingdale	3	9	+200.0	2	6	+200.0
Utica/Rome	11	33	+200.0	10	17	+ 70.0
College of Ceramics	5	3	– 40.0	5	3	– 40.0
Subtotal University/ Other Colleges	137	192	+ 40.1	91	123	+ 35.2
Subtotal Four-Year Residential Campuses	100	150	+ 50.0	67	101	+ 46.4

(table continues)

	# SLN Courses Offered			#SLN Participating Faculty		
	1998-1999	1999-2000	% Growth	1998-1999	1999-2000	% Growth
Broome	38	63	+ 65.8	21	29	+ 38.1
Cayuga	2	6	+200.0	1	5	+400.0
Dutchess	8	11	+ 37.5	4	8	+100.0
Fashion Inst.	12	31	+158.3	9	13	+ 44.4
Herkimer	20	66	+230.0	10	24	+140.0
Hudson Valley	6	9	+ 50.0	3	6	+ 66.7
Jamestown	10	22	+120.0	6	10	+ 66.7
Mohawk Valley	15	15	0.0	7	5	– 28.6
Monroe	70	145	+107.1	28	50	+ 78.6
Orange	4	5	+ 25.0	3	4	+ 33.3
Rockland	1	4	+300.0	1	1	0.0
Schenectady	12	22	+ 83.3	9	14	+ 55.6
Sullivan	9	7	– 22.2	5	4	– 20.0
Tompkins-Cortland	30	77	+156.7	15	24	+ 60.0
Ulster	13	33	+153.8	5	16	+220.0
Westchester	5	6	+ 20.0	3	2	+ 33.3
Subtotal Community Colleges	255	522	+104.7	130	215	+ 65.4
Total for All SLN Members	426	762	+ 78.9	245	380	+ 55.1

Note: Specialized and Statutory Colleges are included in University/Other Colleges listing and subtotals. Subtotals for Four-Year Residential Campuses include all University Centers and University/Other Colleges except Empire State College.

from the Fall 1998 to Spring 2000 semesters, and it is most useful to focus data analysis on a comparison of the growth within the community college and four-year residential segments. Focusing on these two segments throughout this study will result in conclusions that are more generalizable and less dependent on the success or failure of individual campus initiatives.

In making this comparison, it is clear that faculty participation in on-line teaching has grown more rapidly at the community colleges than at the four-year residential campuses during this period. The number of on-line courses offered by the community colleges has grown by 104.7% while the number has grown by 50.0% at the four-year residential campuses. There has also been a larger percentage increase in the number of participating faculty at the community colleges (65.4%) than at the four-year residential campuses (46.4%). It is useful to consider both of these separate measures of faculty participation. An increase in the number of on-line courses offered that goes well beyond the associated increase in participating faculty would indicate that individual faculty members are teaching a greater number of on-line courses. This is the case for the community college segment, where each participating faculty member offered an average of 1.96 on-line courses during the 1998-99 academic year, compared to an average of 2.43 on-line courses in 1999-2000. In comparison, each participating faculty member at the four-year residential campuses offered an average of 1.51 on-line courses in 1998-99 and 1.56 on-line courses in 1999-2000. Academic leaders interested in increasing the number of distance education courses offered by their institution should recognize that this may be accomplished by encouraging additional faculty members to participate in the program, or by encouraging those who are already participating to increase the number of distance courses they are teaching.

Distance Education Goals and Consortium Membership

One of the principal objectives of this study has been to examine the effects that institutional membership in a distance education consortium may have on faculty participation in teaching on-line (Internet-based) distance education courses. To accomplish this objective, the study first set out to identify the goals that academic leaders at the consortium member institutions have for their distance education programs, and then examined the perceived effectiveness of the consortium in meeting those goals.

Table 2 displays responses collected from 43 college and university administrators employed at the consortium member institutions for a set of survey questions (1a. through 1i.) examining these areas. This aggregate data for the respondents suggests that the majority of these administrators believe the most important goals for the distance education program at their institution involve increasing student access and increasing student enrollments. Four of the eight distance education goals examined (1a., 1c., 1d., 1f.) relate to access or enrollment, and these were the only goals rated "very important" by more than 65% of the respondents. Goals related to affordable education, reduced instructional costs, improved course quality, and serving local employers were all considered less important. These survey responses are very comparable to those received in a national survey of distance education experts from more than 1200 colleges and universities conducted by The National Center for Education Statistics (U.S. Department of Education, 1997). Both this study and the NCES study examined the perceived importance of the same eight distance education goals, with similar results.

Further examination of the survey data presented in Table 2 suggests that administrators at the SLN member institutions believe that offering on-line courses

Table 2

Distance Education Goals and Goal Attainment Through SLN: Percentage Distribution of Administrator Responses (n = 43)

Distance Education Program Goals	Importance for Your College/University		Extent Goal Met Through SUNY Learning Network		
	Somewhat Important	Very Important	Minor Extent	Moderate Extent	Major Extent
a. Increasing student access by making courses available at convenient locations	27.9	72.1	41.9	51.2	7.0
b. Making educational opportunities more affordable for students	23.3	48.8	30.2	32.6	0.0
c. Increasing your institution's enrollment	25.6	67.4	48.8	37.2	0.0
d. Increasing student access by reducing time constraints	23.3	65.1	27.9	62.8	2.3
e. Reducing your institution's costs of instruction	37.2	27.9	25.6	4.7	2.3
f. Increasing institution's access to new audiences	16.3	79.1	48.8	25.6	9.3
g. Improving the quality of course offerings	25.6	55.8	41.9	25.6	9.3
h. Meeting the needs of local employers	32.6	53.5	39.5	14.0	2.3

through the consortium is, in most cases, helping them meet their distance education goals to a minor or moderate extent. These minimal levels of goal attainment through participation in the SUNY Learning Network may not be surprising given the small number of on-line courses offered by many of the campuses and how recently these on-line programs have developed, but the future success of the consortium may require improvement in goal attainment.

Segmentation of the Survey Data

If the goals that most college and university leaders have for distance education are centered around increasing student access and enrollments, then it might be expected that this would be especially true at SUNY's community colleges. The importance of student access in the mission of these colleges, and their open enrollment policies, suggest that community colleges may place greater importance on access and enrollment goals for distance education when compared with other types of colleges and universities in the SUNY system. This proposition can be explored through additional segmentation of the survey data.

The segmented data presented in Table 3 suggests that administrators at the community colleges are much more likely than administrators at the four-year campuses to believe the distance education goals in this survey are very important, and they believe that student access and student enrollment goals are especially important. They are also more likely to believe that these goals are being met through their institution's participation in the SUNY Learning Network. While the number of responses in each segment is small, the differences of opinion are quite large, and these differences have been confirmed in qualitative interviews conducted during site visits.

Table 3

Distance Education Goals and Goal Attainment Through SLN: Percentage Distribution of Administrators by Segment

Distance Education Program Goals	Goal Very Important For Your College		Goal Met to Moderate or Major Extent	
	Community College (n = 24)	Four Year Residential (n = 17)	Community College (n = 24)	Four Year Residential (n = 17)
a. Increasing student access by making courses available at convenient locations	91.7	41.2	66.7	47.1
b. Making educational opportunities more affordable for students	58.3	35.3	41.7	17.6
c. Increasing your institution's enrollment	70.8	58.8	45.8	17.6
d. Increasing student access by reducing time constraints	75.0	47.1	75.0	58.8
e. Reducing your institution's costs of instruction	29.2	29.4	8.3	5.9
f. Increasing institution's access to new audiences	87.5	64.7	41.7	17.7
g. Improving the quality of course offerings	58.3	52.9	41.7	17.6
h. Meeting the needs of local employers	62.5	41.2	20.8	5.9

Narrative Data on Distance Education Goals

An examination of the narrative data provided in campus interviews with participating faculty and administrators adds perspective to this study's survey findings and provides an opportunity to explore the convergence of these types of data. In this chapter, the narrative data is meant to facilitate further examination of institutional goals for distance education. The narrations that follow are representative of those collected in the 30 interviews conducted with faculty and administrators employed at the six SUNY Learning Network campuses selected for site visits:

> This department has offered courses all over the State for more than 30 years using adjunct faculty. But our students were having problems getting the courses they needed either fast enough or in the right sequence, so how could we serve a place like Coopers Plains where we might only have four or five students and still offer the program? So that's when we started video conferencing, and it worked great. I went up to five sites with video conferencing, but the problem was the technology and the support at the far end. So one night, I just said, "I'm not going to do this anymore." And I said, "Well, let's try it on-line." (Faculty member at a University College)

> What worries me here in SUNY is that a lot of the good business that we have, that is to say the "cash" business, the graduate business, is going to go away from us, leaving us with the undergrads. I'm not sure now institutions like this are going to survive in the long haul if we don't get into this game with everyone else. (Administrator at a University College)

> We've put our introductory course for non-majors on the Web. That's a course that is a prerequisite for students coming into our program. Of course, people from other universities don't have access to that course. So, one of our motivations is to make sure that course is available to anybody who might be interested in our program. And we are getting students through that mechanism. Bottom line? We want to increase our student head count and our influence, I guess. (Faculty member at a University Center)

> I think the goal is really to provide learning options to students. Our students are much more "time bound". People look at distance learning as being a "place bound" kind of solution, but in our view, it's much more time bound. So, we are trying to help students advance toward degree with more options and more flexibility, and we recognize the market is driving that. If they don't get it from us, they'll get it from someplace else and transfer the credits here. And we believe our market will stay loyal to us if we provide that kind of service, so

we're doing it, and we're doing it fairly aggressively. And we are gaining enrollments. I'm convinced that we're gaining more FTE because students are able to fill out a schedule. And we don't know what's coming next, so if you don't have your faculty engaged in this kind of activity, they're not going to have a clue about how to respond and use what's coming next. So, if we don't have an organization and our people learning about this technology while it's still in its infancy, we won't be prepared to deal with it when it matures even farther. So, it's an investment. (Administrator at a Community College)

We're trying to make sure that professional engineers have a good opportunity to keep up-to-date. Even if they don't take the courses toward a degree, they can use them for retraining. And in a technical area, what you learned is going to get out-of-date, so you may need help. And in Upstate New York, there are a lot of people who don't live near a campus that could give you these advanced degrees. (Faculty member at a University Center)

Chapter VI

Technologies and Teaching

This study has been conducted to explore how academic leaders can act most effectively to increase faculty participation in distance education programs. In approaching this question, it is important to first examine the specific characteristics of the technologies and pedagogies that a college or university is using in its distance education program, and to then determine how these characteristics might act to encourage or discourage faculty participation in distance teaching.

The review of related research presented in Chapter II clearly suggests that distance education programs require faculty adoption of new instructional technologies and pedagogies, and that a number of theoretical propositions relating to the adoption and diffusion of academic innovations may be applied to this area of study. This literature review led to the development of a theoretical framework presented in Chapter III, which integrates concepts from Rogers (1983) and Lindquist (1978) and suggests that the adoption and diffusion of distance education innovations will occur most rapidly when: (a) the proposed distance education technologies and pedagogies demonstrate attribute characteristics that faculty find most acceptable, and (b) academic change leaders employ effective strategies in a process aimed at increasing the incentives and reducing the barriers associated with faculty participation.

This chapter is devoted to the presentation of quantitative and qualitative data describing faculty perceptions of the technologies and pedagogies used in on-line distance education courses offered through the SUNY Learning Network. This data relates specifically to faculty perceptions surrounding five innovation characteristics

which Rogers (1983) suggests may affect the rate of innovation adoption and diffusion: compatibility, relative advantage, observability, complexity and trialability.

Survey Data on Technologies and Teaching

The survey of faculty teaching in the SUNY Learning Network began with a series of nine questions under the heading Technologies and Teaching which were designed to examine faculty opinions concerning the technologies and teaching methods used in SLN courses. Faculty was asked to indicate their level of agreement or disagreement with nine statements describing these course characteristics. Responses from the total faculty group (n = 75) for these nine questions are summarized in Table 4. The full range of faculty survey responses (all questions) is presented in Appendix B.

More than 85% of the responses to the first two questions in this series (1a. and 1b.) indicate that faculty who have taught on-line distance education courses through the SUNY Learning Network believe that the technologies and teaching methods involved are easy to demonstrate to faculty who want to use them, and that they are not too complex for faculty to understand. These responses indicate substantial agreement that this academic innovation (on-line teaching) has a reasonably low level of complexity. This would suggest that on-line teaching has the potential to be adopted by faculty quite rapidly.

The third question in this series (1c.) was designed to explore the compatibility of on-line technologies and pedagogies with traditional faculty values concerning higher education. While this question generated a somewhat more varied response, 72.0% of all faculty responding either agreed or strongly agreed that this innovation was consistent with traditional faculty values, while only 21.3% disagreed or strongly disagreed. It should be noted here that the definition of "traditional faculty values" in this survey

Table 4

Faculty Descriptions of SLN Technologies and Teaching Methods (n=75)

Description	Percentage of Faculty Responding: Don't Know	Strongly Disagree	Disagree	Agree	Strongly Agree
a. Easy to demonstrate to faculty who want to use them	1.3	0.0	13.3	65.3	20.0
b. Too complex for many faculty to understand	2.7	33.3	56.0	8.0	0.0
c. Consistent with traditional faculty values related to higher education	6.7	8.0	13.3	56.0	16.0
d. Likely to increase student access to higher education	0.0	0.0	1.3	49.3	49.3
e. Likely to increase student enrollments at my college/university	6.7	1.3	8.0	52.0	32.0
f. Likely to reduce instructional costs at my college/university	21.3	17.3	28.0	25.3	8.0
g. Likely to increase faculty productivity at my college/university	20.0	12.0	34.7	29.3	4.0
h. Equal in quality to most courses offered on campus	9.3	8.0	12.0	50.7	20.0
i. Better in quality than most courses offered on campus	22.7	10.7	38.7	14.7	13.3

question was left open to the interpretation of those responding, and that the experienced on-line faculty (early adopters) asked to participate in this survey may not be representative of faculty who have not taught on-line. Nevertheless, it would appear that compatibility issues would not reduce significantly the potential for rapid adoption of on-line teaching, especially by an early adopter segment of faculty members.

The next four questions in this series (1d., 1e., 1f., 1g.) were designed to explore faculty perceptions concerning the observability of four of the desired outcomes that are most often associated with distance education: (a) increased student access, (b) increased student enrollments, (c) reduced instructional costs, and (d) increased faculty productivity. These desired outcomes have been identified by college faculty and administrators in several studies (e.g., U.S. Department of Education, 1997; National Education Association, 2000), and are considered some of the most important forces driving the rapid adoption of distance education technologies and pedagogies. The theoretical framework for this study suggests that the adoption and diffusion of on-line teaching innovations would be encouraged if these desired outcomes are actually observable in practice.

The overall faculty response to these four observability questions indicates that these faculty believe overwhelmingly that on-line courses are likely to increase student access to higher education (98.7% agree/strongly agree) and are likely to increase student enrollments at their college or university (84.0% agree/strongly agree). They do not, however, agree that on-line courses are likely to reduce instructional costs or increase faculty productivity. Nearly half of those responding (45.3% and 46.7%, respectively) disagreed or strongly disagreed that the desired cost and productivity outcomes were observable, and only one-third felt that these outcomes were likely to occur at their college or university.

The final pair of questions in this series (1h., 1i.) were designed to explore faculty opinions comparing the quality of the on-line courses offered by their college or university with the traditional courses offered on their campus. These questions were

meant to solicit an overall assessment of the relative advantage that on-line courses might or might not have over campus-based courses in the critical area of course quality.

The overall response to these questions indicates that the participating faculty do not believe that on-line courses hold a relative advantage over campus-based courses in terms of quality, but they do consider on-line courses equal in quality. Specifically, 70.7% of faculty agreed or strongly agreed that their on-line courses were equal in quality to most courses offered on campus, while only 28.0% would rate these courses better in quality. These data suggest that on-line teaching innovations bring no clear relative advantage in quality when compared to the predominant campus-based mode of instruction. The theoretical framework developed for this study suggests that these perceptions could have a negative effect on the rate of on-line course adoption and diffusion.

Segmentation of the survey responses indicates some major differences in the opinions expressed by SLN faculty employed at the consortium's four-year residential campuses versus those employed by community colleges or Empire State College. The four-year residential faculty were much less likely to agree or strongly agree that the on-line distance education courses offered by their institution were consistent with traditional faculty values, equal in quality to the courses offered on campus, likely to increase student enrollments, likely to increase faculty productivity, or likely to reduce instructional costs (see Table 5). These responses suggest that faculty teaching on-line at the four-year residential campuses believe that the technologies and teaching methods used in the SLN consortium are less likely to produce observable benefits or relative advantages, and that they are to some extent incompatible with traditional faculty values.

Table 5

Faculty Descriptions of SLN Technologies and Teaching Methods Segmented by Institutional Type

Description	Percentage Responding Agree or Strongly Agree		
	Community College (n=41)	Empire State College (n=13)	Four-Year Residential (n=21)
a. Easy to demonstrate to faculty who want to use them	87.8	84.6	80.9
b. Too complex for many faculty to understand	9.8	7.7	4.8
c. Consistent with traditional faculty values	78.0	76.9	57.2
d. Likely to increase student access to higher education	97.6	100.0	100.0
e. Likely to increase student enrollments	90.2	84.6	71.4
f. Likely to reduce instructional costs	34.2	46.2	23.8
g. Likely to increase faculty productivity	34.1	38.5	28.6
h. Equal in quality to most courses on campus	78.1	69.3	57.1
i. Better in quality than most courses on campus	29.2	38.5	19.1

The theoretical framework for this study suggests that these faculty would be less likely to adopt on-line teaching innovations, or would choose to adopt those innovations more slowly than others.

Narrative Data on Technologies and Teaching

An examination of the narrative data provided in campus interviews with participating faculty and administrators adds perspective to this study's survey findings and provides an opportunity to explore the convergence of these different types of data. In this chapter, the narrative data is meant to facilitate further examination of the complexity and trialability of on-line teaching, and faculty beliefs about the quality of on-line courses. The narrations that follow are representative of those collected in the 30 interviews conducted with faculty and administrators employed at the six SUNY Learning Network campuses selected for site visits:

> For those people who have become involved with SLN because they wanted to test the technology, I think they have found it to be successful. But it's had its drawbacks. I think it's an alternative we wouldn't have had without SLN. I'm an Annenberg Fellow, and we spent $150 million trying to see whether distance learning was going to work via television, and we can tell you it doesn't! So I think this is in some ways a cheaper and better alternative. (Faculty Member at a University Center)
>
> I had a problem with server links when we started class nine days ago, and it took nine days to resolve them. It seems to me if this is an important offering, I shouldn't have to make four calls and two e-mail messages to get a simple problem resolved by the central administration. Locally, there's no real support that I can see, and that the SUNY central portion of it, the feedback is not necessarily responsive. (Faculty Member at a University Center)
>
> This last semester I created another course for on-line, and I only talked to my MID (instructional designer) once, and it had nothing to do with the course. It had to do with replication. Once you've developed a course once, depending on how software-savvy you are, you don't need your MID again. Once you're comfortable with Lotus Notes, and comfortable with importing things, and that kind of little technical stuff. But I'm not too fancy with this stuff. But I will be after my colleagues iron all the

bugs out and show me how to do it. Then I'll use it! But I'm not "learner one" on that curve. I'm "learner four". (Faculty Member at a University College)

The quality of the learning experience is quite variable. Some distance learners are not doing well because they're not self-motivated or organized. Others probably do better in that environment than on-campus. They can choose the time when they do their learning. For the student that is sort of middle-of-the road or weak, they'll have a harder time as a distance learner. And we don't have the mechanisms in place to keep them up-to-speed. I think a really good distance learning course would have to provide a system of local tutors, but we can't do that really. (Faculty Member at a University Center)

I teach both on-campus and on-line, and I think the on-line students get more. I say that biting my tongue, because I think I'm worth the price of admission. But I think overall, the whole group gets more out of it than the students I have in class. There's a little more structure, the screws are a little bit tighter, the objectives of the course are tighter, and the performance levels are higher. There are just required levels of discussion. You know how half the class gets through never saying a word, and all their non-verbals say "I don't want to be involved". Well, with on-line instruction, you can't do that, and when they realize that's what they have to do, then it works beautifully. (Faculty Member at a Community College)

I think the quality was somewhat inferior on-line. Different students react to it differently. When I teach a class "live", I maybe have 20% attrition. On-line was 50% to 60% attrition, so in some sense the "average student" couldn't even get through the course! It's that much more difficult to be self-motivated, I think, and in addition, all these technical problems with typing equations were very frustrating for students. So for all but the top 15%, it was somewhat inferior, and for the average student, it was impossible! (Faculty Member at a Community College)

In all honesty, I think this is a mediocre, if not, bad way to learn. And I think that the successful learner has to be highly motivated, and it's my experience with undergraduates that less than half of them are! In class, you have the "raised eyebrow" which has a very powerful influence over undergraduates, but you don't have that on-line, and there is a disconnect because students can read something, but they don't hear any intonation. So what I find is that out of the students who sign up for the course, I fully expect a third of them will start late and do poorly because for whatever reason, they're either not well-organized, or lazy, or they don't have an understanding of what will be involved. So this appears to me to not work particularly well for the general population, but it does work well for those people who don't have the opportunity to get to class, and are highly motivated self-starters. I teach an MBA course, and that's an entirely different situation. If I don't get an answer back to somebody within 24 hours, I get a call from them – "how come you haven't answered my e-mail yet?" But for the undergraduates, I don't think it works well. (Faculty Member at a University College)

The students who appreciate the convenience, because they have to work or can't come to campus, or can't afford to be here, or whatever – do well. They recognize

that this is "their shot". But the students who live on-campus and who are a more traditional cohort, the on-line milieu is not for them. At least not in my experience. On the other hand, you can flip that around and look at adult students who thrive there and who don't thrive in the classroom. So what we're learning is that this is a great way to teach adults and older, upper-division students. (Faculty Member at a University College)

I think the quality of learning is as good, maybe better on-line, particularly in getting discussion. In the classroom, you get one student out of 15 or 20 who will raise their hand and respond to a question. And often, there's not much discussion beyond that. Where on-line, everyone has to answer a discussion question, and they seem to be willing to jump in and respond to other people because they're not in front of each other. So I think it's better quality. Generally, the students who don't learn well on-line also don't learn well in the classroom. (Faculty Member at a Community College)

I would say my students on-line get a better course than they do in the classroom, as far as writing is concerned, because there is nothing we communicate that isn't in writing (it's an English course). I'm doing some learning assessment projects. I'm not there yet, but I'm curious to see how well my on-line students perform in relation to the regular class students on our departmental final exam. Because my reaction is (and now we have three of us teaching the course on-line) that they are going to do significantly better than the students in the classroom. (Faculty Member at a Community College)

Chapter VII

Barriers to Faculty Participation

The theoretical model developed by Karl Lewin (1953) suggests that the process of organizational change involves an on-going competition between "driving forces" which contribute to the realization of change, and "restraining forces" which inhibit or act as barriers to change. Lewin's conclusion was that change agents can provide the optimal conditions for changing the existing patterns of behavior in organizations by taking advantage of existing driving forces while at the same time acting to reduce the barriers restraining change.

This chapter is devoted to the presentation of quantitative and qualitative data collected in this study to help identify the existing barriers to faculty participation in on-line distance education, and to the categorization of these barriers in a manner which contributes to the subsequent development of strategies aimed at overcoming them. The data has been collected from a sample of faculty members teaching on-line courses through the SUNY Learning Network, and from a sample of college and university administrators employed at the consortium member institutions and involved in the administration of distance education programs. It includes data taken from faculty and administrator responses to a common set of survey questions and interview questions meant to explore the attitudes and perceptions of the participants.

Survey Data on Barriers to Participation

The faculty and administrator survey instruments used in this study contained an identical set of questions (2a. through 2o.) designed to identify the greatest barriers to faculty participation in on-line teaching. These questions examined the perceived

strength of 14 potential barriers dealing specifically with three innovation characteristics (complexity, trialability, and compatibility) and two change process characteristics (leadership and rewards) described previously in the theoretical framework for this study. The full range of faculty survey responses (n=75) are presented in Appendix B, and the full range of administrator responses (n=43) are presented in Appendix C. Tables found in this chapter present summarized data to facilitate a comparison of the faculty and administrator responses.

Complexity and Trialability Barriers

Four of the survey questions in this series (2d., 2e., 2m., 2n.) examined the prevalence and strength of barriers to faculty participation presented by course development costs, limitations in course delivery technology, restrictive academic policies, and the course approval process. These four areas represent potential barriers associated with the complexity and trialability of on-line teaching. The theoretical framework for the study suggests that faculty participation would be discouraged if these types of barriers were strong. Participation would be discouraged, for example, if an institution's course approval process for distance education courses discouraged faculty from attempting on-line teaching.

Survey responses from a majority of faculty and administrators in the study suggest that participation in on-line teaching is discouraged only to a minor extent, or not at all, by potential barriers associated with the complexity and trialability of this academic innovation. Of the four potential barriers described in these survey questions, course or program development costs appear to present the most significant barrier, yet only 22.7% of faculty and 23.3% of administrators indicated that these costs discouraged

faculty participation to a moderate extent, and only 9.3% of faculty and 14.0% of administrators felt that participation was discouraged to a major extent (see Table 6). It would seem that barriers of this magnitude could be overcome with relative ease.

Compatibility Barriers

A second set of survey questions (2a., 2b., 2g., 2i., 2j., 2l.) examined the extent to which faculty participation might be discouraged by six potential barriers that could be categorized generally as compatibility barriers. That is, they are barriers which would suggest that on-line teaching presents issues of compatibility with existing needs or values at a personal or organizational level.

The first of these compatibility questions (2a.) addressed directly the issue of on-line teaching's compatibility (or fit) with the mission of the college or university where the respondent was employed. Few faculty or administrators believed that incompatibility with their institution's mission discouraged faculty participation to any great extent. In fact, three out of four (78.6% of faculty and 74.4% of administrators) felt that their institution's mission discouraged on-line teaching to only a minor extent, or not at all. It is important to note, however, that additional segmentation of this data reveals major differences between faculty and administrators at the community colleges and those at the four-year residential campuses (see Table 7).

Faculty members and administrators participating in this study generally agreed that a lack of faculty interest in on-line teaching and concerns about the quality of on-line courses present the greatest compatibility issues discouraging faculty participation. More

Table 6

Extent Selected Barriers Discourage On-line Teaching: Percentage Distribution of Faculty and Administrator Responses

	Faculty (n=75)			Administrators (n=43)		
Barriers to On-line Teaching	Don't Know	Not At All or Minor	Moderate or Major	Don't Know	Not At All or Minor	Moderate or Major
Complexity and Trialability:						
Course or program development costs	5.3	62.6	32.0	2.3	60.5	37.3
Limitations in delivery technology	4.0	68.0	28.0	4.7	74.4	21.0
Process for course approval	10.7	69.3	20.0	4.7	76.7	18.6
Restrictive academic policies (e.g., testing)	6.7	81.4	12.0	7.0	88.4	4.6
Compatibility:						
Lack of faculty interest	2.7	37.4	60.0	2.3	32.6	65.1
Concerns about course quality	4.0	41.4	54.7	2.3	39.6	58.1
Negative attitudes about technology	4.0	52.0	44.0	2.3	62.8	34.9
Lack of perceived need (e.g., market)	6.7	64.0	29.3	7.0	53.5	39.6
Legal concerns (e.g., intellectual property)	8.0	70.6	21.4	4.7	58.1	37.2
Lack of fit with college mission	4.0	78.6	17.4	4.7	74.4	20.9

(table continues)

Barriers to On-line Teaching	Faculty (n=75) Don't Know	Not At All or Minor	Moderate or Major	Administrators (n=43) Don't Know	Not At All or Minor	Moderate or Major
Leadership:						
Lack of instructional support on campus	1.3	57.4	41.3	2.3	74.5	23.3
Lack of support from administration	2.7	62.7	34.7	2.3	65.1	32.6
Rewards:						
Concerns about faculty workload	4.0	26.7	69.3	7.0	27.9	65.1
Lack of rewards for on-line teaching	2.7	40.0	57.4	2.3	41.9	55.8

than half of each group indicated that these two factors discourage faculty participation to a moderate or major extent (see Table 6).

An identifiable lack of faculty interest in on-line teaching would represent a significant restraint on the growth of faculty participation in distance education, since participation in these programs remains largely voluntary. There has been little use of administrative authority to pressure or force faculty to teach courses on-line at the colleges and universities included in this study, and the participating faculty and administrators do not consider this an effective strategy for encouraging greater participation (see Chapter VIII). This suggests that academic leaders will need to use other types of strategies to stimulate faculty interest in on-line teaching if they hope to increase faculty participation.

Additional efforts may be needed to identify specific factors underlying the current lack of interest among faculty, but it is reasonable to assume that institutional reward systems are among the factors involved. This study has included an examination of the rewards available currently to faculty participating in on-line teaching, and suggests that some modification in reward systems may be desirable.

Data presented in Chapter VI (Table 4) has shown that more than 70% of SUNY Learning Network faculty believe their on-line courses are equal in quality to courses offered on campus, but data in Table 6 indicates that a majority of SLN faculty and administrators (54.7% and 58.1%, respectively) also believe that concerns about the quality of courses taught on-line discourage faculty participation to a moderate or major extent. An additional 34.7% of faculty and 34.9% of administrators surveyed indicated that quality concerns discourage participation to at least a minor extent. This data would place quality concerns among the most significant barriers to faculty participation at SUNY Learning Network institutions.

Further segmentation of the survey data (see Table 7) indicates that 66.7% of faculty respondents from the consortium's four-year residential campuses consider quality concerns a moderate or major barrier to faculty participation, while only 56.1% of the community college faculty and 30.8% of Empire State College faculty share this view. Responses from SLN administrators showed a greater difference of opinion, with 76.5% of administrators at four-year residential campuses versus 45.8% of community college administrators indicating that quality concerns were a moderate or major barrier to faculty participation. Additional findings in this study suggest that differences in

Table 7

Identification of Moderate or Major Barriers to Faculty Participation: Percentage Distribution by Segment

Barriers to Faculty Participation	Faculty		Administrators	
	Community College (n=41)	Four-Year Residential (n=21)	Community College (n=24)	Four-Year Residential (n=17)
Complexity and Trialability:				
Course or program development costs	26.9	57.1	29.1	52.9
Limitations in delivery technology	24.4	38.0	20.8	23.5
Process for course approval	17.1	23.8	12.5	29.4
Restrictive academic policies (e.g., testing)	14.6	14.3	4.2	5.9
Compatibility:				
Lack of faculty interest	58.6	71.5	45.8	94.1
Concerns about course quality	56.1	66.7	45.8	76.5
Negative attitudes about technology	46.3	38.1	29.1	41.2
Lack of perceived need	22.0	42.8	12.5	82.3
Legal concerns (e.g., intellectual property)	19.5	33.3	29.2	53.0

(table continues)

Barriers to Faculty Partcipation	Faculty		Administrators	
	Community College (n=41)	Four-Year Residential (n=21)	Community College (n=24)	Four-Year Residential (n=17)
Lack of fit with college mission	9.8	23.8	4.2	41.2
Leadership:				
Lack of instructional support	29.3	71.4	20.9	29.4
Lack of support from administration	26.9	57.2	20.8	52.9
Rewards:				
Concerns about faculty workload	65.8	71.5	45.8	94.2
Lack of rewards for on-line teaching	41.5	81.0	45.9	76.5

institutional mission may influence faculty and administrator concerns related to on-line course quality.

Many of the faculty members teaching on-line in the SUNY Learning Network believe that faculty participation is discouraged by negative attitudes surrounding the use of educational technology. While a majority of faculty survey respondents do not believe that these attitudes represent a moderate or major barrier, a relatively large minority (44.0%) believe that they do. Survey responses also indicate that there may be a difference of opinion in how participating faculty and administrators view this issue.

Only 34.9% of administrators believe that negative attitudes about educational technology represent a moderate or major barrier to faculty participation. This difference is especially evident among community college administrators, with only 29.1% of those administrators identifying this as a moderate or major barrier. There is some cause for concern if academic leaders generally underestimate how faculty attitudes about technology impact participation, since it is then more likely that they will not take appropriate actions to help change these attitudes.

Innovation and organizational change models indicate consistently that individuals must recognize a clear need for change before they are likely to adopt new patterns of behavior. If college faculty and administrators do not perceive a strong need for on-line distance education courses, then this educational innovation is not likely to be adopted on a wider basis. It was, therefore, quite important for this study to determine the extent to which a lack of perceived need or limited student market might discourage faculty participation in the SUNY Learning Network.

The aggregated survey response percentages presented in Table 6 indicate that faculty and administrators have somewhat different perceptions regarding this need or market, but most do not believe that a lack of perceived need is a moderate or major barrier. The differences are more evident when the data is segmented to examine responses from faculty and administrators employed at community colleges versus those employed at four-year residential campuses. The segmented data presented in Table 7 suggests that the identification of barriers to faculty participation varies greatly depending on the type of institution. Compatibility barriers related to faculty interest, perceived need, and concerns about course quality appear to be much stronger at four-year residential campuses than at the community colleges.

Administrators responding to the survey were more likely than faculty members to believe that legal concerns such as intellectual property rights or copyright laws might act as a barrier to faculty participation, and more than half of the administrators employed at four-year residential institutions (53.0%) replied that these concerns represent a moderate or major barrier. The participating faculty from the consortium's four-year residential campuses were also more concerned about legal issues than their counterparts at the community colleges, but only one-third indicated that these concerns were a moderate or major barrier to participation.

Leadership Barriers

Two survey questions in this study (2c. and 2k.) examined the extent to which faculty participation in on-line teaching might be discouraged by a lack of instructional support (e.g., support staff on campus), or by a more general lack of support from the college/university administration. These represent two potential barriers that could be associated with a lack of leadership in the planned change process, as outlined in the theoretical framework for this study. Both faculty and administrators often believe a lack of resources for distance education indicates a lack of leadership.

Survey data indicate that the majority of faculty and administrators responding do not believe that faculty participation is discouraged to a moderate or major extent by insufficient instructional or administrative support. Faculty are, overall, more likely than administrators to indicate problems with instructional support at the participating institutions (see Table 6).

It is important, however, that segmentation of these responses reveals large differences of opinion among faculty and administrators employed at the consortium's community colleges and its four-year residential campuses (see Table 7). A much larger

percentage of faculty at the four-year campuses (71.4%) believe that a lack of instructional support discourages on-line teaching to a moderate or major extent, and a majority (57.2%) indicate that there is a more general lack of support from their administration. A majority of the administrators responding from the four-year residential campuses (52.9%) agreed with their faculty that a lack of administrative support acts as a moderate or major barrier to faculty participation. These data suggest that leadership barriers, demonstrated by a lack of instructional and general administrative support or resources, may discourage on-line teaching at four-year residential campuses to a greater extent than at community colleges.

Reward Barriers

Two survey questions in this study (2f. and 2h.) examined the extent to which faculty participation in on-line teaching might be discouraged by a lack of faculty rewards or incentives for teaching distance education courses, or by concerns about faculty workload. These represent two potential barriers associated with the reward systems designed to motivate faculty activities at the participating institutions. Earlier research conducted by Wolcott and Haderlie (1997) suggests that compensation for on-line teaching or course development may be offered as part of a normally assigned faculty workload or as an overload, and that release time is also used as a reward or incentive.

More of the participating SLN faculty identified concerns about faculty workload as a moderate or major barrier to on-line teaching than any other potential barrier examined in the faculty survey (69.3%). Administrators also indicated that workload concerns are among the strongest potential barriers, though they felt that lack of faculty interest was an equally strong barrier (65.1% moderate or major extent).

Additional segmentation of the survey responses (Table 7) indicates that faculty members at the consortium's four-year residential campuses rate concerns about faculty workload somewhat higher than faculty at the community colleges, and administrators at the four-year campuses are much more likely than community college administrators to believe that workload concerns present moderate or major barriers to on-line teaching. Only one in four community college administrators (25.0%) responded that faculty workload concerns discouraged participation to a major extent. A much larger 82.4% of the four-year campus administrators gave that response, and no group in this study ranked any of the potential barriers to faculty participation more strongly.

Both faculty and administrator survey responses indicate a strong belief that faculty participation in on-line teaching is discouraged by a lack of faculty rewards or incentives. More than half of both groups (57.4% of faculty and 55.8% of administrators) believe that a lack of rewards discourages faculty participation to a moderate or major extent. Segmentation of these responses again reveals some differences among the response groups, with faculty and administrators employed at the four-year residential campuses much more likely to indicate that a lack of faculty rewards or incentives discourages on-line teaching than those employed at the community colleges.

A final survey question examining perceived barriers to on-line teaching offered faculty and administrators an opportunity to identify additional or "other" barriers beyond those listed. Only 10.6% of faculty and 14.0% of administrators identified other barriers, suggesting that the list of potential barriers included in the survey instruments was quite comprehensive. Only two additional barriers were identified by more than one survey respondent. Three faculty members and two administrators (4.2% of all respondents) indicated that contractual issues or opposition from a faculty union discouraged faculty

participation at their college or university. Two faculty and three administrators (4.2% of all respondents) indicated that the time required to develop on-line courses was an additional barrier to faculty participation.

Narrative Data on Barriers to Participation

An examination of the narrative data provided in campus interviews with participating faculty and administrators adds perspective to this study's survey findings and provides an opportunity to explore the convergence of these different types of data. In this chapter, the narrative data is meant to facilitate further examination of the barriers associated with faculty participation in distance education. The narrations that follow are representative of those collected in the 30 interviews conducted with faculty and administrators employed at the six SUNY Learning Network campuses selected for site visits:

> I did Physics I and II, and the problem is they are lab courses, so what we developed was a "lab in a box". For Physics I, which is mechanics, students bought a box with Hot Wheels and other mechanical devices and they did the labs on their own. Which is more difficult, I think, than sending essays back and forth over the Internet. It's hard for students to work alone. One of the things you're supposed to learn in the lab is how to work with other people, and you're not doing that! (Faculty Member from a Community College)

> This technology really doesn't work very well for graduate level courses in a technical subject area. We'd be happy if we had technical writers who could help us with a lot of the preparation. I think we need a lot more bandwidth to have a lab discussion with all our distance students be interactive. The technology is there to put cameras on top of your computer, and you have a way to say "everybody look at this". Of course, getting them all to meet at the same time may be hard. We need better software to be able to write an equation on a tablet and have it immediately transmitted in a readable form. And that technology would need to be on both ends so the student could write back. (Faculty Member at a University Center)

> Because of our enrollments, distance learning is not a key factor in our university. I meet people from the local community college, and one of the professors is teaching four distance learning courses because their on-campus enrollment is so small. And he manages to get maybe 10 or 15 students by distance learning. We're

just the opposite. We don't need these students right now, and we're sort of doing this as a service to the community. (Faculty Member at a University Center)

This is not necessarily my feeling, but there is a very cynical opinion among some faculty that the administration just wants more students, more money. Of course they want more students, the more students, the better! But I also think they are responding to the mission of the community college, which is to serve everybody, including the people who are housebound or live way out in the country and can't make it to a campus. So I think there is this sort of desire to serve the population. That's part of what a community college is all about. (Faculty Member at a Community College)

The junior colleges or two-year colleges, have different missions than we do, where this may be a real appropriate technology for the people who work during the day and want to sign on at night. I see their opportunities to offer a wide range of undergraduate courses as being better than ours! The graduate program here has a different mission. It's already an extension-based program. But we have an on-campus population and we are the largest department in Arts and Sciences. My dean will not allow us to offer this on-line as part of a regular teaching load. I'm teaching my course for free! I'm not even getting paid for this course this semester. (Faculty Member at a University College)

I would like to see us have some very selective programs on-line. I don't think it will ever be a major piece of our activity here. But I think it's appropriate where it makes sense, given unique strengths or programs we can extend, or if we can articulate programs with a community college or graduate program someplace. Then, I think we should do it. But I feel no obligation to do it because it keeps you modern or up-to-date. To me, it's got to be programmatically driven, just as you would think about developing any new program. (Administrator at a University Center)

The president is very high on this, and he wants to see us get into on-line development, but there's a lot of resistance to it. We've got at least one dean who is very much against the use of our full-time faculty to teach distance courses. There are other agendas that she has for her school that are legitimate, and she expects the full-time faculty to be involved in. So I think you really have to get it to a point where the institution makes a commitment. Now, at Monroe Community College, there's a huge commitment from the top down. It has been contagious, and in my way of thinking, it is wonderful what they are doing there! I also like what Empire State is doing. It's a natural for them. Broome Community College is doing a lot, and TC3 – they've discovered some programs they never thought would fly! But here at [University College], we have a very conservative, very traditional faculty, and that has been a very difficult thing to overcome. (Faculty Member at a University College)

I think the universities would be more successful with this kind of thing if they thought of it more as continuing education instead of offering it as credit-bearing courses. For instance, one of the courses we've been offering on-line, we offer as a

workshop or symposium type of thing as well – a two-day sort of conference for working professionals. That would work better on-line because then the quality and the testing would be non-issues. That might work better at the university level. (Faculty Member at a University Center)

I think our faculty are most concerned about quality. Are they getting the same kind of information, and are they learning it as well. I think that's the overriding issue, and if there is skepticism, I think its related to that. And I think a lot of people haven't taken the time to look at it. A lot of people see it as telecourses or that sort of thing. Quality is the biggest issue. (Faculty Member at a University Center)

The more non-traditional students you have and the more commuters you have, the more students will come and ask for courses to be put on-line. A faculty member in my department said a year ago that he wouldn't teach on-line. A student came up to him and said, "You know, this would be a great course on-line, so why don't you put it on-line?" And guess what? This spring, he's going to put it on-line. The students motivated him to do it when they said, "We need it, we like it, we want it." And I think that would be the biggest initiator of faculty thinking about this. They have to see a need. (Faculty Member at a University College)

I'm not familiar enough – since I've never done one of these courses – I don't know what kinds of technical support faculty need or consultations they need throughout the course of the semester. I am aware that the services that SLN offers are probably necessary. They need somebody they can call to help them sort out the problems with the software or whatever. (Administrator at a University Center)

As a department chair, I'm trying to build a program on-line, and I have no administrator resources to draw on. I can't promise a faculty member that he or she is going to get a course reduction. This has got to be done off-load. We're at 12 hours a semester, so that means a person has to mount it as an extra service course, and extra service doesn't pay all that much. Right away, you see that evidently it's not a very high priority for this college. If it was, we would say, "It's part of your teaching load or your research load". It's not. (Faculty Member at a University College)

We have a class that a new professor is teaching, and it's fully enrolled, and she said, "I shouldn't have 25 in this class, I should only have 15 because it's so much work". And I said, "Well, you need to keep track of how much work it is." I've done it, and I'm not sure that it's more work. I mean, the course is already there, I don't have to drive two hours to teach it. I don't have office hours because I asked them to ask their questions on the Web, so the whole class gets the answers. I'm still grading their papers exactly as I would (except my hand doesn't get as tired!). I don't have a three-hour class and lecture. So I'm not sure ... Someone would have to prove to me that it takes more time. (Faculty Member at a University College)

I think time is really a big issue. You are doing research, so you are working 70 hours a week and squeezing an extra hour in is difficult. The school has got to recognize that this is not the same course that I'm teaching on-campus. I taught my course once on-line, and I don't want to do it again unless I'm forced to do it! I have a regular class with 30 students on-campus, and then they add 15 distance students, so the combined number is much larger than a regular class and I don't have enough time to deal with the distance students. So, if you do that, there's no motivation for the faculty. (Faculty Member at a University Center)

To the extent that non-research related or non-traditional teaching related activity is discouraged by the tenure process, distance learning will be discouraged. "You shouldn't be doing that, you should be doing your research, doing your articles, and bringing in the grants." So the rewards system ... I live with this in continuing education all the time. The reward system is the major inhibitor. Teaching on-line should be weighted at least equally, if not, maybe a tick higher, than general teaching. But at a research institution, there's a question to what degree teaching is even a part of the reward system. (Administrator at a University Center)

Chapter VIII

Strategies to Increase Faculty Participation

This study has been conducted to address an ongoing need for empirical examination of current strategies aimed at encouraging faculty participation in distance education, to assess the effectiveness of these strategies, and to contribute to the development of improved strategies. This chapter presents quantitative and qualitative data describing the institutional strategies currently employed at 31 colleges and universities selected for this study, and examines the perceived effectiveness of these strategies. The survey and qualitative research components of the study have collected a large amount of data describing specific strategies employed by the SUNY Learning Network institutions, and the study has had an important objective of categorizing these strategies within a larger theoretical framework to increase the usefulness of this research for academic leaders engaged in developing new or improved strategies.

The theoretical framework presented in Chapter III has suggested that the adoption and diffusion of distance education innovations in colleges and universities may be examined most effectively from two perspectives: (a) examination of the attribute characteristics of the specific distance education technologies and pedagogies used, and (b) examination of the processes and strategies used to encourage the adoption and diffusion of distance education within specific institutions or types of institutions. The attribute characteristics of the on-line technologies and teaching methods used by faculty offering distance education courses through the SUNY Learning Network have been examined in Chapter VI, and data presented in that chapter suggests that many of the perceived attributes of on-line teaching would encourage rapid adoption of this academic

innovation. This chapter takes the next step by describing the processes and strategies used to encourage faculty participation in the SUNY Learning Network, placing these strategies within a larger theoretical context, and examining their perceived effectiveness at the institutions studied.

Survey Data on Strategies

The faculty and administrator survey instruments used in this study contained an identical set of questions (3a. through 3m.) designed to gather opinion data regarding the theoretical importance and perceived effectiveness of 13 common strategies that a college or university administration could employ to encourage greater faculty participation in on-line teaching. Respondents were asked to rate the importance of each strategy in general or in theory, as well as the effectiveness of each strategy at their college or university. Mean scores and standard deviations have been computed to produce a comparison of these importance and effectiveness measures, and to identify "implementation gaps" that may exist when the effective implementation of a strategy on campus lags behind its theoretical importance. Strategies that demonstrate large implementation gaps may offer excellent opportunities for change leaders to increase faculty participation by improving strategy implementation.

The theoretical framework presented in Chapter III suggests that an effective process for encouraging innovation and change in higher education must meet critical needs in five general areas: linkage, openness, leadership, ownership, and rewards. The 13 institutional strategies examined in this chapter can each be categorized within these five areas, since each strategy is generally aimed at meeting one or more of these critical needs. It is important to note that institutional membership in a distance education

consortium is a strategy that may be used to meet a number of critical needs, and the effectiveness of that strategy is examined later in this chapter.

Theoretical Importance

Survey participants were asked to rate the general or theoretical importance of a set of 13 common administrative strategies in order to identify strategies they believed were important for encouraging faculty participation in distance education. Table 8 displays these survey responses in percentage terms, including responses in the "somewhat important" and "very important" categories. Tables 9, 10, and 11 add another perspective to this data by providing mean and standard deviation scores computed from an assigned scale to describe the relative importance of each strategy.

Both faculty and administrators in this study indicate that providing excellent instructional support (e.g., support staff on campus) is the most important strategy for academic leaders who want to encourage on-line teaching. This strategy received the highest importance ratings (both percentage distribution and mean scores) from every group of survey respondents. This is a leadership strategy because providing excellent instructional support requires that academic leaders make appropriate staffing and resource allocation decisions. Qualitative responses from faculty make it clear that they want easy access to instructional support staff to assist them in course design and to help with technology-related problems in course delivery. It should be noted in this regard that participating faculty and administrators praise the central help desk services and instructional design staff provided to their institutions through the SUNY Learning Network consortium.

Five other leadership strategies were examined in the surveys, and four of them received relatively low importance ratings. Respondents felt that convincing faculty that

distance education fits the college/university mission was an important strategy, but the potential importance of academic governance, strategic planning, and market research activities were ranked lower. A strategy of using administrative authority to pressure or force faculty to teach on-line received the lowest importance rankings overall, but a substantial 23.2% of administrators felt that this was a somewhat or very important strategy, compared to only 8.0% of the faculty.

Three survey questions (3a., 3b., 3d.) examined the perceived importance of linkage strategies designed to bring interested faculty and campus opinion leaders into contact with other groups, departments, or institutions to share information and ideas related to on-line teaching. Survey data suggests that linkage strategies are fundamental to encouraging faculty participation. More then 90% of all respondents indicated that providing faculty workshops and training opportunities and providing opportunities to observe other faculty engaged in on-line teaching were somewhat or very important strategies (Table 8). The mean importance scores for these linkage strategies are among the highest of the 13 strategies examined (Table 9). A smaller number of faculty and administrators (80.0% and 86.1%, respectively) indicated that it was somewhat or very important to help faculty connect with distance education experts from other institutions, but the importance ratings for this strategy still compare favorably with most of the strategies examined. Consortium membership may facilitate these linkage strategies.

Two survey questions (3l., 3m.) examined the perceived importance of reward strategies in encouraging on-line teaching, and the importance ratings for these strategies

Table 8

Importance and Effectiveness of Common Strategies: Percentage Distribution of Faculty and Administrator Responses

Strategies to Increase Faculty Participation	Faculty (n = 75)				Administrators (n = 43)			
	Important?		Effective?		Important?		Effective?	
	Some	Very	Some	Very	Some	Very	Some	Very
Linkage Strategies:								
Providing faculty workshops and training opportunities	24.0	66.7	36.0	40.0	25.6	74.4	51.2	23.3
Providing opportunities to observe other faculty engaged in on-line teaching	48.0	45.3	45.3	16.0	65.1	30.2	55.8	14.0
Helping faculty connect with distance education experts from other institutions	48.0	32.0	44.0	20.0	72.1	14.0	53.5	4.7
Openness Strategies:								
Demonstrating the administration's willingness to consider a wide range of views	26.7	45.3	22.7	21.3	46.5	39.5	60.5	2.3
Leadership Strategies:								
Providing excellent instructional support	10.7	84.0	33.3	34.7	23.3	76.7	41.9	41.9
Convincing faculty that distance education fits the college/university mission	41.3	45.3	40.0	16.0	20.9	74.4	51.2	14.0
Using our academic governance process to achieve consensus on distance education policies and priorities	32.0	37.3	22.7	5.3	39.5	34.9	25.6	2.3

(table continues)

Strategies to Increase Faculty Participation	Faculty (n = 75)				Administrators (n = 43)			
	Important?		Effective?		Important?		Effective?	
	Some	Very	Some	Very	Some	Very	Some	Very
Using a strategic planning process to achieve consensus on distance education policies and priorities	37.3	32.0	21.3	9.3	46.5	37.2	51.2	0.0
Completing a market analysis to determine and document student demand for distance courses	37.3	28.0	21.3	2.7	30.2	34.9	20.9	0.0
Using administrative authority to pressure or force faculty to teach on-line courses	5.3	2.7	4.0	0.0	20.9	2.3	14.0	2.3
Ownership Strategies:								
Seeking faculty input when developing campus computer networks and technology plans	48.0	38.7	42.7	8.0	37.2	58.1	48.8	30.2
Rewards Strategies:								
Providing rewards for distance teaching equal to or greater than those provided for teaching on campus	33.3	45.3	25.3	14.7	27.9	41.9	39.5	16.3
Providing special recognition for faculty who teach on-line	48.0	28.0	22.7	12.0	48.8	41.9	51.2	9.3

Table 9

Importance and Effectiveness of Common Strategies: Mean and Standard Deviation Scores

Strategies to Increase Faculty Participation		Faculty (n=75)		Administrators (n=43)	
		Important	Effective	Important	Effective
Linkage Strategies:					
Providing faculty workshops and training opportunities	M	3.52	3.05	3.74	2.84
	SD	0.81	0.98	0.44	0.95
Providing opportunities to observe other faculty engaged in on-line teaching	M	3.33	2.53	3.23	2.65
	SD	0.76	1.03	0.61	0.95
Helping faculty connect with distance education experts from other institutions	M	3.00	2.61	2.95	2.33
	SD	0.94	1.05	0.65	0.97
Openness Strategies:					
Demonstrating the administration's willingess to consider a wide range of views	M	3.00	2.32	3.19	2.42
	SD	1.13	1.15	0.85	0.88
Leadership Strategies:					
Providing excellent instructional support	M	3.75	2.87	3.77	3.16
	SD	0.68	1.07	0.43	0.92
Convincing faculty that distance education fits the college/university mission	M	3.27	2.49	3.70	2.63
	SD	0.83	1.02	0.56	0.93
Using academic governance process to achieve consensus on distance education policies and priorities	M	2.92	1.88	2.93	1.86
	SD	1.06	0.94	1.06	0.89

(table continues)

Strategies to Increase Faculty Participation		Faculty (n=75)		Administrators (n=43)	
		Important	Effective	Important	Effective
Using a strategic planning process to achieve consensus on distance education policies and priorities	M	2.91	1.95	3.12	2.14
	SD	0.98	1.03	0.91	0.94
Completing a market analysis to determine and document student demand for distance education courses	M	2.80	1.75	2.81	1.67
	SD	1.00	0.89	1.12	0.81
Using administrative authority to pressure or force faculty to teach on-line courses	M	1.83	1.39	2.02	1.53
	SD	0.64	0.57	0.74	0.83
Ownership Strategies:					
Seeking faculty input when developing campus computer networks and technology plans	M	3.16	2.39	3.51	2.95
	SD	0.89	0.90	0.67	0.97
Rewards Strategies:					
Providing rewards for distance teaching equal to or greater than those provided for teaching on campus	M	3.20	2.19	2.98	2.42
	SD	0.87	1.09	1.08	1.10
Providing special recognition for faculty who teach on-line	M	2.96	2.01	3.28	2.40
	SD	0.88	1.08	0.77	1.03

Note. Mean scores for importance of each strategy are based on assigned scale (1 = neutral or "can't say"; 2 = not important; 3 = somewhat important; 4 = very important). Mean scores for effectiveness of each strategy are based on assigned scale (1 = neutral or not attempted; 2 = not effective; 3 = somewhat effective; 4 = very effective).

Table 10

Importance and Effectiveness of Common Strategies: Mean and Standard Deviation Scores for Faculty Segments

Strategies to Increase Faculty Participation		Community College (n = 41)		Empire State College (n = 13)		Four Year Residential (n = 21)	
		Imp	Eff	Imp	Eff	Imp	Eff
Linkage Strategies:							
Providing faculty workshops and training opportunities	M	3.76	3.32	3.00	2.85	3.38	2.67
	SD	0.62	1.01	1.15	1.07	0.74	0.73
Providing opportunities to observe other faculty engaged in on-line teaching	M	3.54	2.71	2.92	2.62	3.19	2.14
	SD	0.64	1.03	1.04	0.96	0.68	1.01
Helping faculty connect with distance education experts from other institutions	M	3.17	3.00	2.38	2.00	3.05	2.24
	SD	0.77	0.95	1.19	1.08	0.97	0.94
Openness Strategies:							
Demonstrating the administration's willingness to consider a wide range of views	M	3.22	2.56	2.69	2.38	2.76	1.81
	SD	1.04	1.21	1.03	1.12	1.30	0.93
Leadership Strategies:							
Providing excellent instructional support	M	3.88	3.05	3.46	3.00	3.67	2.43
	SD	0.51	1.07	0.97	0.91	0.73	1.08
Convincing faculty that distance education fits the college/university mission	M	3.32	2.68	3.38	2.92	3.10	1.86
	SD	0.72	0.99	0.96	0.95	0.94	0.85
Using our academic governance process to achieve consensus on distance education policies and priorities	M	3.02	1.95	2.85	2.62	2.76	1.29
	SD	1.08	0.92	1.07	0.96	1.04	0.56

(table continues)

Strategies to Increase Faculty Participation		Community College (n = 41)		Empire State College (n = 13)		Four Year Residential (n = 21)	
		Imp	Eff	Imp	Eff	Imp	Eff
Using a strategic planning process to achieve consensus on distance education policies and priorities	M	3.07	2.02	2.69	2.69	2.71	1.33
	SD	0.85	1.01	1.11	1.03	1.10	0.66
Completing a market analysis to determine and document student demand for distance education courses	M	3.00	1.78	2.38	2.00	2.67	1.52
	SD	0.97	0.88	0.87	0.82	1.06	0.93
Using administrative authority to pressure or force faculty to teach on-line courses	M	1.83	1.39	1.69	1.38	1.90	1.38
	SD	0.59	0.59	0.48	0.51	0.83	0.59
Ownership Strategies:							
Seeking faculty input when developing campus computer networks and technology plans	M	3.20	2.44	3.08	2.62	3.14	2.14
	SD	0.90	0.98	0.86	0.65	0.91	0.85
Reward Strategies:							
Providing rewards for distance teaching equal to or greater than those provided for teaching on campus	M	3.32	2.61	2.62	1.54	3.33	1.76
	SD	0.85	1.09	0.77	0.66	0.86	0.94
Providing special recognition for faculty who teach on-line	M	2.98	2.37	2.69	1.69	3.10	1.52
	SD	0.85	1.16	0.85	0.75	0.94	0.87

Note. Mean scores for importance of each strategy are based on assigned scale (1 = neutral or "can't say"; 2 = not important; 3 = somewhat important; 4 = very important). Mean scores for effectiveness of each strategy are based on assigned scale (1 = neutral or not attempted; 2 = not effective; 3 = somewhat effective; 4 = very effective).

Table 11

Importance and Effectiveness of Common Strategies: Mean and Standard Deviation Scores for Administrator Segments

Strategies to Increase Faculty Participation		Community College (n = 24)		Four Year Residential (n = 17)	
		Important	Effective	Important	Effective
Linkage Strategies:					
Providing faculty workshops and training opportunities	M	3.83	2.96	3.71	2.71
	SD	0.38	1.00	0.47	0.92
Providing opportunities to observe other faculty engaged in on-line teaching	M	3.17	2.58	3.29	2.65
	SD	0.64	0.97	0.59	0.93
Helping faculty connect with distance education experts from other institutions	M	2.92	2.50	3.06	2.12
	SD	0.72	0.88	0.56	1.05
Openness Strategies:					
Demonstrating the administration's willingness to consider a wide range of views	M	3.21	2.50	3.18	2.24
	SD	0.78	0.93	1.01	0.83
Leadership Strategies:					
Providing excellent instructional support	M	3.75	3.21	3.88	3.06
	SD	0.44	1.06	0.33	0.75
Convincing faculty that distance education fits the college/university mission	M	3.50	2.79	3.94	2.35
	SD	0.66	0.98	0.24	0.86
Using our academic governance process to achieve consensus on distance education policies and priorities	M	2.92	2.04	3.06	1.65
	SD	1.14	0.95	0.90	0.79

(table continues)

Strategies to Increase Faculty Participation		Community College (n = 24)		Four Year Residential (n = 17)	
		Important	Effective	Important	Effective
Using a strategic planning process to achieve consensus on distance education policies and priorities	M	3.08	2.38	3.29	1.82
	SD	0.93	0.88	0.77	0.95
Completing a market analysis to determine and document student demand for distance education courses	M	2.58	1.54	3.12	1.82
	SD	1.18	0.78	1.05	0.88
Using administrative authority to pressure or force faculty to teach on-line courses	M	1.92	1.25	2.18	1.88
	SD	0.72	0.53	0.73	0.99
Ownership Strategies:					
Seeking faculty input when developing campus computer networks and technology plans	M	3.58	2.96	3.47	3.00
	SD	0.58	1.08	0.80	0.87
Reward Strategies:					
Providing rewards for distance teaching equal to or greater than those provided for teaching on campus	M	3.17	2.75	2.76	1.94
	SD	1.01	1.07	1.20	1.03
Providing special recognition for faculty who teach on-line	M	3.08	2.67	3.59	2.00
	SD	0.78	0.96	0.71	1.06

Note. Mean scores for importance of each strategy are based on assigned scale (1 = neutral or "can't say"; 2 = not important; 3 = somewhat important; 4 = very important). Mean scores for effectiveness of each strategy are based on assigned scale (1 = neutral or not attempted; 2 = not effective; 3 = somewhat effective; 4 = very effective).

are high. Almost four out of five faculty members surveyed (78.6%) believe that it is somewhat or very important for colleges and universities to provide rewards for distance teaching equal to or greater than those provided for teaching on campus as a strategy for encouraging faculty participation. Administrators were somewhat less likely to hold this view (69.8%). The survey instrument did not provide a definition for the types of rewards that might be required, but qualitative data from campus interviews suggests that faculty believe traditional rewards such as release time, tenure and promotion consideration, and faculty salaries provide sufficient reward opportunities if properly used. Beyond these, some faculty believe that technological rewards such as home Internet access and laptop computers may also help to encourage participation. But the consistent theme found in faculty narratives is that participation in on-line teaching is often not recognized as an important activity for faculty and is, therefore, not rewarded sufficiently. Only 40.0% of faculty surveyed felt that rewards were used somewhat or very effectively on their campus, compared to 55.8% of the administrators surveyed (Table 8).

Another common reward strategy involves providing special recognition for faculty who teach distance courses on-line. Percentage responses and mean importance score ratings from this survey suggest that most faculty believe special recognition is less important than other types of rewards, while administrators give this strategy more favorable ratings (Tables 8 and 9).

Two survey questions (3f. 3g.) explored the perceived importance and effectiveness of openness strategies and ownership strategies in encouraging faculty participation. Faculty and administrators indicated that developing a sense of ownership in the institution's distance education program by seeking faculty input when developing

campus computer networks and technology plans would rank in the top half of the strategies suggested, while demonstrating the administration's willingness to consider a wide range of views was somewhat less important (Tables 8 and 9).

Perceived Effectiveness

Further review of the data presented in Tables 8 and 9 show that faculty and administrators participating in this study believe that there are major differences between the theoretical importance of 13 common strategies for encouraging on-line teaching and the effective use of those strategies on campus. An "implementation gap" score has been calculated for each strategy by subtracting its mean score on an effectiveness scale from its mean score on an importance scale (see Table 12). This calculation results in a comparative measure that reflects both the relative importance of a strategy in theory and the relative effectiveness of that strategy in practice. Large implementation gap scores are most often found when a strategy is considered very important but has not been implemented effectively on campus. Strategies with large implementation gaps may offer academic leaders excellent opportunities to increase faculty participation by improving strategy implementation. This would be true especially in cases where a strategy is considered very important in theory but has not been used effectively.

The data displayed in Table 12 suggests that academic leaders may need to place greater emphasis on the effective use of several leadership strategies to encourage greater faculty participation in distance education. They may specifically benefit by using their institution's academic governance process or a strategic planning process to achieve consensus on distance education policies and priorities. These processes can demonstrate

Table 12

Importance and Effectiveness of Common Strategies: Mean Scores and "Implementation Gaps"

	Faculty (n = 75)			Administrators (n = 43)		
	Important	Effective	(Gap)	Important	Effective	(Gap)
Linkage Strategies:						
Providing faculty workshops and training opportunities	3.52	3.05	(0.47)	3.74	2.84	(0.90)
Providing opportunities to observe other faculty engaged in on-line teaching	3.33	2.53	(0.80)	3.23	2.65	(0.58)
Helping faculty connect with distance education experts from other institutions	3.00	2.61	(0.39)	2.95	2.33	(0.62)
Openness Strategies:						
Demonstrating the administration's willingness to consider a wide range of views	3.00	2.32	(0.68)	3.19	2.42	(0.77)
Leadership Strategies:						
Providing excellent instructional support	3.75	2.87	(0.88)	3.77	3.16	(0.61)
Convincing faculty that distance education fits the college/ university mission	3.27	2.49	(0.78)	3.70	2.63	(1.07)
Using our academic governance process to achieve consensus on distance education policies and priorities	2.92	1.88	(1.04)	2.93	1.86	(1.07)

(table continues)

	Faculty (n = 75)			Administrators (n = 43)		
	Important	Effective	(Gap)	Important	Effective	(Gap)
Using a strategic planning process to achieve consensus on distance education policies and priorities	2.91	1.95	(0.96)	3.12	2.14	(0.98)
Completing a market analysis to determine and document student demand for distance education courses	2.80	1.75	(1.05)	2.81	1.67	(1.14)
Using administrative authority to pressure or force faculty to teach on-line courses	1.83	1.39	(0.44)	2.02	1.53	(0.49)
Ownership Strategies:						
Seeking faculty input when developing campus computer networks and technology plans	3.16	2.39	(0.77)	3.51	2.95	(0.56)
Reward Strategies:						
Providing rewards for distance teaching equal to or greater than those provided for teaching on campus	3.20	2.19	(1.01)	2.98	2.42	(0.56)
Providing special recognition for faculty who teach on-line	2.96	2.01	(0.95)	3.28	2.40	(0.88)

Note. Mean scores for importance of each strategy are based on assigned scale (1 = neutral or "can't say"; 2 = not important; 3 = somewhat important; 4 = very important). Mean scores for effectiveness of each strategy are based on assigned scale (1 = neutral or not attempted; 2 = not effective; 3 = somewhat effective; 4 = very effective). Implementation gap is the difference between a strategy's mean score for importance and mean score for effectiveness. Standard deviations for mean scores are listed in Tables 10 and 11.

the administration's willingness to consider a wide range of views concerning distance education, while also helping to establish distance education's fit with the college/university mission. A typical strategic planning process might also begin with a market analysis to document student demand for distance education courses. While these leadership strategies received comparatively low ratings in terms of theoretical importance, their implementation gaps are relatively large. Only 28.0% of faculty surveyed felt that their administration had used their college or university's academic governance process effectively, and only 30.6% felt that a strategic planning process had been used effectively. More than half of the administrators surveyed (51.2%) felt that strategic planning was used effectively on their campus, and this difference of opinion with faculty is noteworthy (Table 8). It is possible that the strategic planning process on some campuses has been primarily an administrative undertaking with little faculty involvement, or that faculty may simply believe that the process was not effective.

A second area of faculty and administrator disagreement can be found in the way each group rates the effectiveness of their administration's reward strategies. Faculty members in this study clearly believe that a large gap exists between the theoretical importance of providing special recognition and equal rewards for distance teaching versus the effectiveness of their administration in implementing these strategies (Table 12). Administrators believe these implementation gaps are much smaller, however, and this may be a critical area of disagreement given its high importance for faculty.

Survey responses also indicate that the three linkage strategies chosen have relatively high importance ratings and relatively small implementation gaps (Table 12). Given the fundamental importance of linkage strategies in the planned change process, administrators at SLN institutions have focused on linkage strategies. There are,

however, apparent differences in the perceived effectiveness of these strategies when the survey data is segmented by institutional type.

Segmentation of Strategies Data

Table 13 displays mean importance scores and implementation gap scores for community college faculty, four-year residential campus faculty, community college administrators, and four-year residential campus administrators. This data reveals some important differences of opinion regarding the theoretical importance and perceived effectiveness of the common administrative strategies examined.

At the broadest level of data analysis, it is clear that faculty members and administrators employed at the community colleges in this study believe that their academic leaders have effectively implemented a variety of strategies to encourage on-line teaching, and that faculty and administrators employed at the four-year residential campuses believe that their leaders have acted far less effectively. This can be illustrated by calculating the average size of the implementation gap scores for the 13 strategies considered (Table 13), and comparing the results for each group of survey respondents. The average size of the 13 implementation gaps identified by community college administrators and faculty is 0.66 and 0.73, respectively. The average size of the 13 implementation gaps identified by administrators and faculty employed at the four-year residential campuses is 1.02 and 1.13, respectively. Faculty and administrators at the four-year residential campuses see greater differences between the theoretical importance of the strategies examined and the effectiveness of their implementation.

A closer examination of the survey data presented in Tables 10, 11, 12, and 13 results in some additional observations that are relevant for this study:

Table 13

Importance and Effectiveness of Common Strategies: Mean Importance Scores and "Implementation Gaps" by Segment

Strategies to Increase Faculty Participation	Comm. College Faculty		Four-Year Residential Faculty		Comm. College Admin.		Four-Year Residential Admin.	
	Imp	(Gap)	Imp	(Gap)	Imp	(Gap)	Imp	(Gap)
Linkage Strategies:								
Providing faculty workshops and training opportunities	3.76	(0.44)	3.38	(0.71)	3.83	(0.87)	3.71	(1.00)
Providing opportunities to observe other faculty engaged in on-line teaching	3.54	(0.83)	3.19	(1.05)	3.17	(0.59)	3.29	(0.64)
Helping faculty connect with distance education experts from other institutions	3.17	(0.17)	3.05	(0.81)	2.92	(0.42)	3.06	(0.94)
Openness Strategies:								
Demonstrating the administration's willingness to consider a wide range of views	3.22	(0.66)	2.76	(0.95)	3.21	(0.71)	3.18	(0.94)
Leadership Strategies:								
Providing excellent instructional support	3.88	(0.83)	3.67	(1.24)	3.75	(0.54)	3.88	(0.82)
Convincing faculty that distance education fits the college/university mission	3.32	(0.64)	3.10	(1.24)	3.50	(0.71)	3.94	(1.59)
Using our academic governance process to achieve consensus on distance education policies and priorities	3.02	(1.07)	2.76	(1.47)	2.92	(0.88)	3.06	(1.41)

(table continues)

Strategies to Increase Faculty Participation	Comm. College Faculty		Four-Year Residential Faculty		Comm. College Admin.		Four-Year Residential Admin.	
	Imp	(Gap)	Imp	(Gap)	Imp	(Gap)	Imp	(Gap)
Using a strategic planning process to achieve consensus on distance education policies and priorities	3.07	(1.05)	2.71	(1.38)	3.08	(0.70)	3.29	(1.47)
Completing a market analysis to determine and document student demand for distance education courses	3.00	(1.22)	2.67	(1.15)	2.58	(1.04)	3.12	(1.30)
Using administrative authority to pressure or force faculty to teach on-line courses	1.83	(0.44)	1.90	(0.52)	1.92	(0.67)	2.18	(0.30)
Ownership Strategies:								
Seeking faculty input when developing campus computer networks and technology plans	3.20	(0.76)	3.14	(1.00)	3.58	(0.62)	3.47	(0.47)
Reward Strategies:								
Providing rewards for distance teaching equal to or greater than those provided for teaching on campus	3.32	(0.71)	3.33	(1.57)	3.17	(0.42)	2.76	(0.82)
Providing special recognition for faculty who teach on-line	2.98	(0.61)	3.10	(1.58)	3.08	(0.41)	3.59	(1.59)

Note. Mean scores for importance of each strategy are based on assigned scale (1 = neutral or "can't say"; 2 = not important; 3 = somewhat important; 4 = very important). Implementation gap is the difference between a strategy's mean score for importance and mean score for effectiveness. Standard deviations for mean scores are listed in Tables 10 and 11.

1. Linkage strategies receive high importance ratings from all four groups of respondents. These strategies have been implemented quite effectively at the community colleges, but less effectively at the four-year residential campuses.

2. Academic leaders at the four-year residential campuses have been less effective than those at community colleges in demonstrating their willingness to consider a wide range of views concerning distance education.

3. All four groups indicate that providing excellent instructional support ranks first or second in theoretical importance of the 13 common strategies examined. Faculty at the four-year residential campuses believe there is a large gap between the importance they place on this strategy and its effective implementation in practice.

4. All four groups believe it is very important for academic leaders to convince faculty that distance education fits their college/university mission. Community college faculty and administrators believe this has been done more effectively than their counterparts at the four-year residential campuses. This strategy ranks first in importance for administrators at the four-year campuses, but they also believe the associated implementation gap is the largest. Four-year residential faculty also agree that the implementation of this strategy has not been effective.

5. All four groups give average importance ratings to strategies involving the use of a strategic planning or academic governance process to achieve consensus on policies and priorities, but all four also indicate that these strategies are among the most poorly implemented.

6. Community college faculty and administrators agree that academic leaders have not effectively completed a market analysis to determine student demand for distance courses, indicating that this strategy has the largest implementation gap of the strategies

examined. They do not, however, believe this strategy is highly important. Faculty and administrators at the four-year residential campuses also attribute low importance and low effectiveness ratings to this strategy.

7. Faculty and administrators at the four-year residential campuses disagree on both the importance and effectiveness of providing rewards for distance teaching equal to those provided for teaching on campus. Faculty believe this strategy is more important than administrators do, and they believe that the implementation of this strategy has been less effective.

8. Faculty and administrators at the four-year residential campuses agree that their academic leaders have not been effective in providing special recognition for faculty who teach on-line. Community college faculty and administrators give this strategy lower importance ratings, and believe that this strategy has been implemented more effectively at the community colleges.

Value of Consortium Membership

A section of the faculty and administrator surveys (questions 4a. through 4i.) was devoted to examining how institutional membership in the SUNY Learning Network consortium affected the distance education activities and resources at the member institutions. A positive assessment of the consortium's impact in these areas would suggest that consortium membership might be an effective strategy for increasing faculty participation in distance education.

The data displayed in Table 14 suggests that the SUNY Learning Network has had a positive impact in a variety of areas, with strong agreement among faculty and administrators that the consortium has provided valuable resources for technological infrastructure, faculty training, and distance education course development. These high

ratings have been given in the areas that the consortium has focused on most, and resources have been provided that could likely not be duplicated by many of the campuses if they were not consortium members. The SUNY administration's goal of providing fundamental infrastructure and training resources to the campuses in an efficient and effective manor has apparently been achieved.

The consortium has been somewhat less effective as a linkage strategy aimed at providing faculty with opportunities to interact with distance education experts outside campus, or with distance education faculty employed by other colleges, but the majority of faculty and many administrators believe the impact has been positive. The data also suggests that consortium membership may provide very good opportunities to provide system-wide marketing services and administrative support for faculty who teach on-line.

Segmentation of this data indicates that faculty and administrators at the four-year residential campuses feel less positive about consortium membership than faculty and administrators at the community colleges. They provide fewer positive ratings in every area examined, but they do not provide a greater number of negative ratings. Rather, the faculty and administrators at the four-year residential campuses were much more likely to respond that their assessment of the consortium was neutral, or that they did not know how to respond. It appears that they have clearly been less engaged in the consortium's activities.

Table 14

Impact of Consortium Membership: Percentage Indicating SLN Affected Their Program Positively or Very Positively

Affected Program Areas	Faculty (n=75)	Administrators (n=43)
a. Course/program advertising and marketing activities	72.0	55.9
b. Technological infrastructure required for on-line course delivery	80.0	62.8
c. Opportunities for training and faculty development	86.7	74.5
d. Resources for distance education course development	81.4	60.5
e. Faculty compensation/rewards for teaching courses on-line	81.4	60.5
f. Access to distance education experts outside campus	64.0	53.5
g. Interaction with distance education faculty employed by other colleges	61.4	34.9
h. Funding to support on-line program	46.7	58.1
i. Administrative services provided to assist faculty who teach on-line	57.3	62.8

Narrative Data on Strategies

An examination of the narrative data provided in campus interviews with participating faculty and administrators adds perspective to this study's survey findings and provides an opportunity to explore the convergence of these different types of data. In this chapter, the narrative data is meant to facilitate further examination of institutional strategies for encouraging faculty participation in distance education. The narrations that follow are representative of those collected in the 30 interviews conducted with faculty and administrators employed at the six SUNY Learning Network campuses selected for site visits:

> At the training sessions, there were cultural differences. There were people from community colleges who had a very different approach to what they were teaching. And that was kind of disappointing, because it wasn't very innovative at all. But once we got started, and started accessing some of the instructional design people with SLN, they were able to say, "Why don't you try this, or this might work better," and that interaction was good. And if we didn't have that, I think we would have made a lot more mistakes. (Faculty Member at a University Center)

> We have our own MID (Multimedia Instructional Designer) on campus, and he's excellent. Without him, about one-third of us would never have got going. But he needs to be four people! We just got an e-mail that said, "We need to make some changes, and for those of you with computers at home, if you want, I'll come over to your house and do it for you." That's the kind of support we get! (Faculty Member at a Community College)

> Well, what I think is really nice to have is other people on your campus who have already done it. Now, I don't know what that means for the first few people who do it – they don't have that resource. But it's much easier. I was in a cohort (we have what we call cohorts) so there was already 25 people on campus teaching distance learning courses. None of them were science faculty, but they had a lot of the same issues. That's more important than just having a tech person to help you with the nuts and bolts. You need the people who will help you with the "soft" questions like how you motivate students. (Faculty Member at a Community College)

> Whenever there is any question here about the teaching load, of if teaching in the classroom is different from teaching on-line, there's a lot of openness here when the parties get together. It's not, "I'm going to show you" or "I'm going to take you to task." It's, "Hey, we have this thing that can potentially add to the college in many ways, so let's get together and see if we can work something out." That doesn't

exist at all places, and that's what makes this a nice place to work. (Faculty Member at a Community College)

At the risk of sounding self-congratulatory, we've never taken advantage of any faculty member who's been a part of this. So there's a level of trust that we are going to be fair with them and treat them well, and not try to take their work and give it to someone else. When they develop the course, they have the right of first refusal on a section of that course for six semesters following that time. Our assumption is that by then, things have changed and the course would need to be redone anyway. But it builds in some guarantee that we're not going to take their course, pay them, and then cut them out of any future opportunities. (Administrator at a Community College)

The decision-making has been very ad-hoc. But as you know, to a faculty person, that probably isn't all bad! There aren't many situations where we have that kind of flexibility. Maybe we haven't identified the problems that need to be addressed though. (Faculty Member at a University Center)

Our approach has been "Let's let 1000 flowers grow and see what works for us and what doesn't." We've got a couple of faculty groups who are now asking the question, "Should we get more targeted in what we do in these areas?" And they are beginning to take it on, along with my staff in this office. I think we've got enough experiments now that we can ask ourselves, "Should we continue to do this number of things, or what would make sense for us, given our culture and who we are?" (Administrator at a University Center)

Before we started with the SUNY Learning Network, we spent a year laying the ground work for this stuff by having a distance education working group which was a study group of faculty and support staff and administrative staff. And the purpose of that group was to identify and articulate issues about how the college should be positioning itself in relation to where the technology was going. And I think that was a good educational opportunity for a number of faculty who were involved. This was before the Web, but we were talking about the various models for distance education at that time. That group produced a report and sort of laid out the issues that the college needed to address. (Administrator at a Community College)

Since we're in a unionized environment, it makes some decision-making work more smoothly than it might otherwise, because it doesn't have to go through a governance process. Most of the things are really about working conditions or compensation issues. On the class size issue, for example, enrollment exploded in the fall of 1998 and faculty were struggling in serving all of those students. We made some decisions on the fly with me sitting down with the president of the Faculty Association and agreeing on what was appropriate. He reviewed it with his executive group, I reviewed it with the president, and we formulated a long-term memorandum of agreement on the adjustments to class size. So, essentially working with the Faculty Association on those issues is all that it has taken here. (Administrator at a Community College)

I think you need release time. I mean, that is really kind of a minimal offering to get a faculty member involved. I think for most faculty, it takes a lot more time to prep for an on-line course. So some kind of acknowledgment that that additional time is not going to come on evenings and weekends, that that extra time is valued by the institution, and they give you release time for it. I think that's really pretty crucial. (Faculty Member at a Community College)

The stipend from SLN is not great. We might do better at a research university to write a proposal and get paid for the summer than to get paid for SLN. And I think it's irrelevant in terms of promotion. The criteria for promotion in most universities is based on research, publications, and grant dollars. They want students to say you're a good instructor, but that's just part of the tenure process, and putting in the extra time for distance learning right now, at this kind of campus, isn't relevant. I think the Chair would say, "Don't do this yet, until you've got tenure, because your research and funding is much more important." (Faculty Member at a University Center)

The monetary rewards that we have here are, I think, a little bit different from some of the other schools. We have an "over 20" formula that's built-in, where if you go over 20 students in a class, you end up with a double overload. They create another template for you, and you teach two sections of the same class. So that's an incentive. And we get a stipend of $2000 for developing a new on-line course. Those incentives will always be enough for some people to get involved. (Faculty Member at a Community College)

The advantages of the consortium are having access to the faculty training so that I don't have to mount it on this campus. So I can send more faculty, and I don't have to worry about the training programs. And I have heard back from individual faculty that not only did they find the training useful, but they made contacts with other people. (Administrator at a University Center)

I love having other people taking care of the logistics, the advertising, help-desk, the software buying, the decision-making of what software to use, the servers – I don't worry about any of that stuff, and I don't want to. The SLN staff take care of everything, and they don't limit me in any way. Without SLN, there would be no path for us to do this. (Faculty Member at a University College)

The SLN help was good. And that's from someone who tends to be a bit skeptical about what these bureaucracies can offer. We were pleased with their responsiveness and with what they had to offer. Now, if we could have something like that locally, I think that might help, but I didn't find that calling our people at SLN was difficult or burdensome. (Faculty Member at a University Center)

I think for the vast majority of people, it made putting a class on-line a lot easier. I would go to these training sessions and there were people who were really technophobes. But they were willing to learn, and with really no technical background whatsoever, but SLN got their courses up and running! And that's not going to happen unless you have some really strong support system, a lot of

training, a template that's very easy to use. If it weren't for the SUNY Learning Network, I don't think we would be offering these courses. It's really led to the explosion in how many courses are offered here. (Faculty Member at a Community College)

The SLN reduced our overhead and our development costs. They provided a ready-made infrastructure and they worked a lot of the bugs out of the system. And it works! So just from the view of supportive technology, they were extremely helpful. (Administrator at a Community College)

In a positive sense, SLN has brought us together with the rest of the system, so we kind of know what other people are doing out there, and we have gained something from that discourse. Though maybe not as much as some other people have gained. We have our own structure here. We don't really need some of the services which they provide. The value added that they give us would be marketing, but beyond that, not much. But they contacted us and we said, "Sure, we'll work with you." (Administrator at a University Center)

Chapter IX

Summary and Recommendations

The objectives of this concluding chapter are to summarize the empirical findings of this study, and to consider some implications of these findings for academic leaders seeking to increase faculty participation in college and university distance education programs.

The problem focus for this study was the ongoing need for empirical examination of current strategies for encouraging faculty participation in distance education to assess the effectiveness of these strategies and to contribute to the development of improved strategies. The principal objectives were:

1. To examine how existing theories of innovation diffusion and planned organizational change may provide a framework for the development and evaluation of institutional strategies to encourage faculty participation in distance education.

2. To identify and describe the strategies currently employed by a group of state-supported colleges and universities to encourage faculty participation in distance education.

3. To illustrate the effects that specific strategies or types of strategies may have on increasing faculty participation in distance education through a comparative case study of the selected institutions.

4. To examine specifically the effects that institutional membership in a distance education consortium may have on faculty participation in teaching Internet-based distance education courses.

The institutions selected for this study included 31 colleges and universities who are members of the State University of New York (SUNY) Learning Network distance education consortium. The study examined how faculty participation in Internet-based distance education has grown at the selected institutions over a period of two academic years (1998-99 and 1999-2000), and compared the variety and perceived effectiveness of institutional strategies used to encourage faculty participation during this period. One objective of this comparative analysis was to test the general proposition that colleges and universities that deal more effectively with the driving and restraining forces surrounding faculty participation in distance education will demonstrate greater growth in faculty participation than those that deal with these forces less effectively.

The first of these objectives was met through an extensive review of existing research literature and the development of a theoretical framework. The literature review covered three topical areas: (a) the diffusion of innovations within the context of distance education, (b) the organizational culture found within colleges and universities, and how this culture influences distance education programs, and (c) college and university collaboration and consortium membership within the context of distance education (see Chapter II).

The review of existing research led to the development of a theoretical framework which suggested that the adoption and diffusion of distance education in colleges and universities could be examined most effectively from two perspectives: (a) examination of the attribute characteristics of the specific distance education technologies and pedagogies used, and (b) examination of the processes and strategies used to encourage the adoption and diffusion of distance education within specific institutions or types of institutions. Eight theoretical propositions were developed to test the application of the

theoretical framework in a comparative case study of 31 colleges and universities that are members of the SUNY Learning Network distance education consortium (see Chapter III).

The second, third, and fourth objectives for this study were met through a comparative case study of the SUNY Learning Network institutions. The research methodology for this case study employed a two-phase research design with a descriptive survey component followed by a qualitative interview component (see Chapter IV). The survey component of the study resulted in the collection of survey data from 75 faculty members who had taught on-line courses through the SUNY Learning Network, and from 43 academic leaders engaged in the administration of the program at the participating colleges and universities. The qualitative interview component of the study collected more than 30 hours of narrative data through personal interviews with 15 faculty members and 15 administrators conducted during site visits to six of the colleges and universities in the consortium and the SUNY Office of Advanced Learning and Information Services in Albany, New York.

The findings and recommendations summarized in this chapter have resulted from an examination of both the survey and narrative data collected throughout this study, with a focus on the convergence of these separate types of data, and the implications of the findings for the advancement of faculty participation in distance education programs.

Research Findings

The major findings from this study are summarized below:

1. There is significant evidence to suggest that faculty participation in distance education may be increased more easily within community colleges than within four-year residential institutions. Faculty participation in the SUNY Learning Network program

has grown at a faster rate in the consortium's community colleges than its four-year residential institutions during the period of this study. The fundamental reasons behind this difference in faculty participation are likely centered around differences in institutional mission and culture. The continuing education mission of the community colleges, which is highly focused on student access, particularly encourages faculty participation and a high level of administrative support. Academic leaders at the community colleges in this study have implemented more strategies to encourage faculty participation than the academic leaders at four-year residential campuses, and their strategies have been implemented more effectively.

2. Examination of faculty perceptions regarding the attribute characteristics of on-line teaching suggests that those characteristics would encourage rapid adoption of this academic innovation. In fact, this appears to be a very effective choice of educational technology in terms of its potential to engage faculty members easily. A large majority of faculty who have taught on-line believe that the technologies and teaching methods used are not complex, and that they are easy to demonstrate to faculty who want to use them. Complexity and trialability barriers do not appear to discourage faculty participation to any large extent.

3. A majority of faculty who have taught on-line believe that on-line teaching is consistent with traditional faculty values, and that it is likely to increase student access and enrollments at their college or university. Faculty employed at four-year residential campuses were less likely to believe that the on-line courses offered by their institution were consistent with traditional faculty values, or likely to increase enrollments.

4. A majority of faculty who have taught on-line do not believe that on-line courses are likely to reduce instructional costs or increase faculty productivity. Narrative

data suggests that the participating faculty believe that on-line courses generally require smaller class size if they are to be offered with high quality, and that teaching on-line requires a more substantial commitment of faculty time than teaching on-campus.

5. A majority of faculty believe that on-line courses are equal in quality to those offered on-campus, but they do not believe that on-line courses are better than campus-based courses in terms of quality. This suggests that on-line teaching innovations bring no clear relative advantage in quality when compared to the predominant campus-based mode of instruction. These perceptions could have a negative effect on the rate of on-line course adoption and diffusion. Narrative data suggests, however, that many faculty believe on-line courses can provide a higher quality learning experience than campus-based courses for students who are mature, highly motivated, and computer literate.

The comparative quality of distance education courses remains a substantial issue among faculty and administrators, and continues to represent a major barrier to faculty participation. Faculty teaching on-line at the four-year residential campuses believe the technologies and teaching methods used by the SUNY Learning Network are less likely to produce observable benefits or relative advantages than faculty teaching at the community colleges. Narrative data also suggests that the Internet-based technologies and teaching methods used by SUNY Learning Network faculty may be less effective for teaching science and technology courses.

6. Compatibility barriers represent some of the most serious obstacles to increasing faculty participation in on-line distance education at the institutions studied. Barriers related to a lack of faculty interest, lack of perceived need for on-line courses, and concerns about the quality of on-line courses represent obstacles to faculty

participation that are especially strong at the four-year residential colleges and weaker at the community colleges studied.

Negative attitudes about the use of technology represent an additional compatibility barrier that discourages faculty participation, but the majority of faculty and administrators believe that this barrier is surmountable if faculty are provided with appropriate opportunities for observation and training.

7. Faculty and administrators at the four-year residential institutions studied are much more likely than those at the community colleges to identify problems with the level of instructional support available to faculty who teach on-line, as well as a more general lack of support from their college or university administration. A majority believe that these factors represent moderate or major barriers to faculty participation. These barriers have been categorized as leadership barriers throughout this study, since faculty and administrators most often believe that academic leaders are responsible for providing an appropriate level of institutional resources and support for distance education programs.

8. Both faculty members and college administrators in this study believe that reward barriers represent the greatest barriers to faculty participation in distance education. These barriers include a general lack of rewards or incentives for on-line teaching, as well as specific concerns related to faculty workload. While this belief is evident among faculty and administrators at all types of institutions, those employed at the four-year residential institutions in the study hold this belief more strongly than those employed at the community colleges. Narrative data suggests that on-line teaching may hold little value in the faculty reward systems established at research universities due to their particular mission and culture.

9. Both faculty and administrators in this study indicate that providing excellent instructional support (e.g., support staff on campus) is the most important strategy for academic leaders who want to encourage on-line teaching. This strategy received the highest importance ratings (both percentage distribution and mean scores) from every group of survey respondents. This is a leadership strategy because providing excellent instructional support requires that academic leaders make appropriate staffing and resource allocation decisions. Qualitative responses from faculty make it clear that they want easy access to instructional support staff to assist them in course design and to help with technology-related problems in course delivery. It should be noted in this regard that participating faculty and administrators praise the central help desk services and instructional design staff provided to their institutions through the SUNY Learning Network consortium.

10. Faculty members and administrators participating in this study clearly believe that linkage strategies, such as providing faculty workshops, are important strategies for encouraging faculty participation in distance education. The majority of participants believe that academic leaders at their college or university have implemented these strategies effectively, and many indicate that the SUNY Learning Network consortium has been helpful in implementing linkage strategies.

11. Faculty members and administrators employed at the community colleges in this study believe that their academic leaders have effectively implemented a variety of strategies to encourage on-line teaching, while faculty and administrators employed at the four-year residential campuses believe their academic leaders have acted far less effectively. It is reasonable to assume that there is a relationship between the effective

strategies implemented at the community colleges and the comparatively rapid growth in faculty participation at those colleges.

12. Faculty members and administrators employed at the four-year residential institutions in this study have much different opinions regarding the importance and effectiveness of certain reward strategies. These faculty members place greater importance on rewards and incentives, and they believe that their academic leaders have been very ineffective in providing rewards and special recognition for faculty who teach on-line.

13. Faculty members and administrators in this study agree that the SUNY Learning Network consortium has helped their institution meet its distance education goals, but most administrators believe that goal attainment has been minimal or moderate. Community college administrators are more likely than administrators at the four-year residential campuses to believe that their distance education goals are being met through participation in the SUNY Learning Network.

Recommendations

Based on the findings from this research, the following recommendations for action and further research may prove helpful to academic leaders who wish to encourage greater faculty participation in distance education:

1. Academic leaders should be certain distance education clearly fits their institutional mission and goals before seeking to expand a distance education program. This does not mean simply that distance education could be pursued as part of the institution's mission, but rather that it should be. Academic leaders at four-year institutions may find that a distance education program will expand most rapidly if it is affiliated with a continuing education unit or professional school emphasizing outreach.

Strategies aimed at increasing faculty participation may be most effective within the context of a higher education organization with a history and mission emphasizing continuing education and outreach.

2. Focus first on the selection of a distance education technology that best fits faculty needs, and involve faculty members in the selection process. It is vital that the distance education technology chosen is simple for faculty to use and requires few new skills. It should be a technology that faculty can try on a limited basis before making a greater commitment, and it should produce educational results that are easily observed and evaluated. The technology should support high quality interactions between faculty and students. It should not sacrifice faculty control of the learning process, require significant training, or require a high level of technical support.

3. Academic leaders should ensure that their institution provides excellent instructional support services for faculty engaged in on-line teaching.

4. Academic leaders should implement effective linkage strategies by providing faculty with excellent training programs and opportunities to observe other faculty engaged in distance education. Helping faculty connect with distance education experts from other institutions may also be helpful.

5. Academic leaders should initiate and guide a planned change process aimed at encouraging faculty participation in distance education programs. This process should involve faculty in collaborative decision-making aimed at achieving consensus on distance education policies and priorities. This may occur within the context of a strategic planning process, academic governance process, union contract negotiations, or another process of collaborative decision-making that involves both faculty and administration.

6. Academic leaders should provide rewards and incentives for distance teaching that are equal to or greater than those provided for teaching on-campus. Most campuses will have a substantial number of early adopter faculty who will attempt distance teaching regardless of the institutional reward system, but growth in faculty participation will be difficult to sustain in the absence of a well-designed system of faculty rewards and incentives. Narrative data suggests that a variety of traditional faculty rewards (such as, stipends, release time, consideration in promotion and tenure review, and counting distance education courses as part of the regular teaching load) would provide sufficient reward options. It may also be useful to provide faculty with technological incentives for participation. Many SUNY Learning Network faculty were greatly encouraged by providing them with laptop computers and Internet access for home use.

7. Academic leaders who wish to stimulate faculty participation in distance education within a large number of institutions should consider establishing a distance education consortium to support those institutions efficiently and effectively. The SUNY Learning Network consortium has provided the system administration with an efficient and effective means of leveraging its limited resources.

8. Academic leaders at colleges and universities should consider the benefits of joining a distance education consortium. Consortium membership can provide additional resources to support distance education programming, and can be especially effective in the areas of technological infrastructure, instructional support services, and faculty training. Leaders should, however, weigh the value of consortium membership against any potential loss of institutional control in areas such as technology choice or faculty rewards.

9. Academic leaders should conduct action research projects on their campuses to continue the search for strategies that will encourage faculty participation in distance education. Conducting a number of faculty interviews on campus to explore a series of research questions can provide a significant opportunity to identify effective institutional strategies for increasing participation.

In summary, this comparative case study of SUNY Learning Network institutions has provided academic leaders with a theoretical framework for the evaluation and development of institutional strategies aimed at increasing faculty participation in distance education. It has provided some empirical evidence which suggests that eight theoretical propositions may be helpful to those who seek to understand and encourage the adoption and diffusion of distance education innovations among college and university faculty. Finally, it has provided a valuable opportunity to illustrate the positive effects that institutional membership in a distance education consortium can have on faculty participation in distance education.

Appendix A

SURVEY OF FACULTY TEACHING IN THE SUNY LEARNING NETWORK 1998-99

This survey is being sent to a select group of SUNY faculty who taught one or more on-line distance education courses through the SUNY Learning Network in 1998-99. The Informed Consent Form included with this survey contains additional information about this research project. Your personal response to these questions is very important to our research.

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1. Technologies and Teaching

(Please indicate your level of agreement or disagreement with each of the following points.)

The on-line (Internet-based) distance education courses offered by my college/university use technologies and teaching methods that are:

	Don't Know	Strongly Disagree	Disagree	Agree	Strongly Agree
a. Easy to demonstrate to faculty who want to use them	☐	☐	☐	☐	☐
b. Too complex for many faculty to understand	☐	☐	☐	☐	☐
c. Consistent with traditional faculty values related to higher education	☐	☐	☐	☐	☐
d. Likely to increase student access to higher education	☐	☐	☐	☐	☐
e. Likely to increase student enrollments at my college/university	☐	☐	☐	☐	☐
f. Likely to reduce instructional costs at my college/university	☐	☐	☐	☐	☐
g. Likely to increase faculty productivity at my college/university	☐	☐	☐	☐	☐
h. Equal in quality to most courses offered on campus	☐	☐	☐	☐	☐
i. Better in quality than most courses offered on campus	☐	☐	☐	☐	☐

2. Barriers to Faculty Participation

To what extent do the following factors discourage faculty at your college/university from teaching on-line (Internet-based) distance education courses? (Check one response on each line.)

	Don't Know	Not At All	Minor Extent	Moderate Extent	Major Extent
a. Lack of fit with our college/university mission	☐	☐	☐	☐	☐
b. Lack of perceived need (e.g., limited student market)	☐	☐	☐	☐	☐
c. Lack of support from our college/university administration	☐	☐	☐	☐	☐
d. Course or program development costs	☐	☐	☐	☐	☐
e. Limitations in technology used for course delivery	☐	☐	☐	☐	☐
f. Concerns about faculty workload	☐	☐	☐	☐	☐
g. Lack of faculty interest	☐	☐	☐	☐	☐
h. Lack of faculty rewards or incentives for teaching distance education courses	☐	☐	☐	☐	☐
i. Legal concerns (e.g., intellectual property rights, copyright laws)	☐	☐	☐	☐	☐
j. Concerns about quality of courses taught on-line	☐	☐	☐	☐	☐
k. Lack of instructional support (e.g., support staff on campus)	☐	☐	☐	☐	☐
l. Negative attitudes surrounding use of educational technology (e.g., computers)	☐	☐	☐	☐	☐
m. Restrictive academic policies (e.g., testing or grading policies)	☐	☐	☐	☐	☐
n. Process for distance education course or program approval	☐	☐	☐	☐	☐
o. Other (specify)_____	☐	☐	☐	☐	☐

_____

_____

3. Strategies to Increase Faculty Participation in Distance Education

Following is a list of common strategies that a college or university administration could employ to encourage greater faculty participation in teaching on-line (Internet-based) distance education courses. Please indicate in:

- Column A - the importance of this strategy *in general or in theory* for increasing faculty participation.
- Column B - the degree to which you believe this strategy is used effectively *by your college/university administration* to increase faculty participation.

Strategies to Increase Faculty Participation	A Importance of this strategy **in general or in theory:** 1. neutral or "can't say" 2. not important 3. somewhat important 4. very important				B Effectiveness of this strategy **at your college/university:** 1. neutral or not attempted 2. not effective 3. somewhat effective 4. very effective			
a. Helping faculty connect with distance education experts from other institutions	☐ (1)	☐ (2)	☐ (3)	☐ (4)	☐ (1)	☐ (2)	☐ (3)	☐ (4)
b. Providing opportunities to observe other faculty engaged in on-line teaching	☐ (1)	☐ (2)	☐ (3)	☐ (4)	☐ (1)	☐ (2)	☐ (3)	☐ (4)
c. Providing excellent instructional support (e.g., support staff on campus)	☐ (1)	☐ (2)	☐ (3)	☐ (4)	☐ (1)	☐ (2)	☐ (3)	☐ (4)
d. Providing faculty workshops and training opportunities related to on-line teaching	☐ (1)	☐ (2)	☐ (3)	☐ (4)	☐ (1)	☐ (2)	☐ (3)	☐ (4)
e. Completing a market analysis to determine and document student demand for distance courses	☐ (1)	☐ (2)	☐ (3)	☐ (4)	☐ (1)	☐ (2)	☐ (3)	☐ (4)
f. Demonstrating the administration's willingness to consider a wide range of views concerning distance education	☐ (1)	☐ (2)	☐ (3)	☐ (4)	☐ (1)	☐ (2)	☐ (3)	☐ (4)
g. Seeking faculty input when developing campus computer networks and technology plans	☐ (1)	☐ (2)	☐ (3)	☐ (4)	☐ (1)	☐ (2)	☐ (3)	☐ (4)
h. Convincing faculty that distance education fits the college/university mission	☐ (1)	☐ (2)	☐ (3)	☐ (4)	☐ (1)	☐ (2)	☐ (3)	☐ (4)
i. Using our academic governance process to achieve consensus on distance education policies and priorities	☐ (1)	☐ (2)	☐ (3)	☐ (4)	☐ (1)	☐ (2)	☐ (3)	☐ (4)
j. Using a strategic planning process to achieve consensus on distance education policies and priorities	☐ (1)	☐ (2)	☐ (3)	☐ (4)	☐ (1)	☐ (2)	☐ (3)	☐ (4)
k. Using administrative authority to pressure or force faculty to teach courses on-line	☐ (1)	☐ (2)	☐ (3)	☐ (4)	☐ (1)	☐ (2)	☐ (3)	☐ (4)
l. Providing special recognition for faculty who teach distance courses on-line	☐ (1)	☐ (2)	☐ (3)	☐ (4)	☐ (1)	☐ (2)	☐ (3)	☐ (4)
m. Providing rewards for distance teaching equal to or greater than those provided for teaching on campus	☐ (1)	☐ (2)	☐ (3)	☐ (4)	☐ (1)	☐ (2)	☐ (3)	☐ (4)

4. Consortium Membership

How has your institution's membership in the SUNY Learning Network consortium affected your distance education activities or resources in the areas listed below? (Check one response on each line.)

	Neutral or Don't Know	Affected Very Negatively	Affected Negatively	Affected Positively	Affected Very Positively
a. Course/program advertising and marketing activities	☐	☐	☐	☐	☐
b. Technological infrastructure required for on-line course delivery	☐	☐	☐	☐	☐
c. Opportunities for training and faculty development in on-line teaching	☐	☐	☐	☐	☐
d. Resources for distance education course development	☐	☐	☐	☐	☐
e. Faculty compensation/rewards for teaching courses on-line	☐	☐	☐	☐	☐
f. Access to distance education experts outside campus	☐	☐	☐	☐	☐
g. Interaction with distance education faculty employed by other colleges	☐	☐	☐	☐	☐
h. Funding to support on-line distance education program	☐	☐	☐	☐	☐
i. Administrative services provided to assist faculty who teach on-line	☐	☐	☐	☐	☐

5. Best Practices

Please enter a brief response to each of the following questions based on your experience as a SUNY faculty member or administrator:

a. What strategies should the academic and administrative leaders of your college/university use to help faculty learn more about teaching distance education courses on-line?

_____

_____

_____

_____

b. What leadership strategies would be most effective in achieving consensus among faculty and administrators regarding distance education policies and priorities?

c. What resources are needed most to support faculty who teach distance education courses on-line through the SUNY Learning Network?

d. What rewards provide the greatest incentive to increase faculty participation in teaching distance education courses on-line? How can we encourage more faculty to teach these courses?

e. What are the advantages and disadvantages associated with your institution's membership in the SUNY Learning Network consortium? How has this consortium affected your work?

6. About Yourself

Please answer the following questions about yourself.

a. I am employed currently at a:

- ☐ SUNY Community College (e.g., Broome)
- ☐ SUNY University College (e.g., Brockport)
- ☐ SUNY University Center (e.g., Binghamton)
- ☐ SUNY College of Technology (e.g., Morrisville)
- ☐ SUNY Specialized College (e.g., Utica-Rome)
- ☐ SUNY Statutory College (e.g., Ceramics)

b. If you are unsure of your college/university classification in question #6a above, you may enter your campus name here: _____

c. I am employed currently as a:

- ☐ Full-time faculty member with tenure
- ☐ Full-time faculty member without tenure
- ☐ Part-time or adjunct faculty member
- ☐ Department Chairperson
- ☐ Other (specify): _____

d. How many on-line (Internet-based) courses did you teach during the 1998-99 academic year? _____

e. How many "traditional" campus-based courses did you teach during the 1998-99 academic year? _____

f. How many on-line courses do you expect to teach during the 1999-2000 academic year? _____

g. How many campus-based courses do you expect to teach during the 1999-2000 academic year? _____

Thank you for taking the time to complete this survey!

SURVEY OF COLLEGE & UNIVERSITY LEADERS AT SUNY LEARNING NETWORK CAMPUSES

This survey is being sent to a select group of college presidents, vice presidents, deans, and distance education directors at 37 SUNY campuses that are member institutions in the SUNY Learning Network consortium for on-line distance education. The Informed Consent Form included with this survey contains additional information about this research project. Your personal response to these questions is very important to our research.

---

1. Program Goals

Following is a list of goals that a college or university might have for their distance education programs or activities. Please answer in:

- Column A – How important is each goal for your institution's distance education program?
- Column B – To what extent is this goal being met by your institution offering distance education courses on-line through the SUNY Learning Network?

Distance Education Goals	A Importance For Your College/University 1. not important 2. somewhat important 3. very important	B Extent Goal Met Through SUNY Learning Network: 1. not at all 2. minor extent 3. moderate extent 4. major extent
a. Increasing student access by making courses available at convenient locations	☐ (1) ☐ (2) ☐ (3)	☐ (1) ☐ (2) ☐ (3) ☐ (4)
b. Making educational opportunities more affordable for students	☐ (1) ☐ (2) ☐ (3)	☐ (1) ☐ (2) ☐ (3) ☐ (4)
c. Increasing your institution's enrollment	☐ (1) ☐ (2) ☐ (3)	☐ (1) ☐ (2) ☐ (3) ☐ (4)
d. Increasing student access by reducing time constraints for course taking	☐ (1) ☐ (2) ☐ (3)	☐ (1) ☐ (2) ☐ (3) ☐ (4)
e. Reducing your institution's per student costs of instruction	☐ (1) ☐ (2) ☐ (3)	☐ (1) ☐ (2) ☐ (3) ☐ (4)
f. Increasing institution's access to new audiences	☐ (1) ☐ (2) ☐ (3)	☐ (1) ☐ (2) ☐ (3) ☐ (4)
g. Improving the quality of course offerings	☐ (1) ☐ (2) ☐ (3)	☐ (1) ☐ (2) ☐ (3) ☐ (4)
h. Meeting the needs of local employers	☐ (1) ☐ (2) ☐ (3)	☐ (1) ☐ (2) ☐ (3) ☐ (4)
i. Other (specify) _____	☐ (1) ☐ (2) ☐ (3)	☐ (1) ☐ (2) ☐ (3) ☐ (4)

2. Barriers to Faculty Participation

To what extent do the following factors discourage faculty at your college/university from teaching on-line (Internet-based) distance education courses? (Check one response on each line.)

	Don't Know	Not At All	Minor Extent	Moderate Extent	Major Extent
a. Lack of fit with our college/university mission	☐	☐	☐	☐	☐
b. Lack of perceived need (e.g., limited student market)	☐	☐	☐	☐	☐
c. Lack of support from our college/university administration	☐	☐	☐	☐	☐
d. Course or program development costs	☐	☐	☐	☐	☐
e. Limitations in technology used for course delivery	☐	☐	☐	☐	☐
f. Concerns about faculty workload	☐	☐	☐	☐	☐
g. Lack of faculty interest	☐	☐	☐	☐	☐
h. Lack of faculty rewards or incentives for teaching distance education courses	☐	☐	☐	☐	☐
i. Legal concerns (e.g., intellectual property rights, copyright laws)	☐	☐	☐	☐	☐
j. Concerns about quality of courses taught on-line	☐	☐	☐	☐	☐
k. Lack of instructional support (e.g., support staff on campus)	☐	☐	☐	☐	☐
l. Negative attitudes surrounding use of educational technology (e.g., computers)	☐	☐	☐	☐	☐
m. Restrictive academic policies (e.g., testing or grading policies)	☐	☐	☐	☐	☐
n. Process for distance education course or program approval	☐	☐	☐	☐	☐
o. Other (specify)_____	☐	☐	☐	☐	☐

_____

_____

3. Strategies to Increase Faculty Participation in Distance Education

Following is a list of common strategies that a college or university administration could employ to encourage greater faculty participation in teaching on-line (Internet-based) distance education courses. Please indicate in:

- Column A - the importance of this strategy *in general or in theory* for increasing faculty participation.
- Column B - the degree to which you believe this strategy is used effectively *by your college/university administration* to increase faculty participation.

Strategies to Increase Faculty Participation	A Importance of this strategy **in general or in theory:** 1. neutral or "can't say" 2. not important 3. somewhat important 4. very important				B Effectiveness of this strategy **at your college/university:** 1. neutral or not attempted 2. not effective 3. somewhat effective 4. very effective			
a. Helping faculty connect with distance education experts from other institutions	☐ (1)	☐ (2)	☐ (3)	☐ (4)	☐ (1)	☐ (2)	☐ (3)	☐ (4)
b. Providing opportunities to observe other faculty engaged in on-line teaching	☐ (1)	☐ (2)	☐ (3)	☐ (4)	☐ (1)	☐ (2)	☐ (3)	☐ (4)
c. Providing excellent instructional support (e.g., support staff on campus)	☐ (1)	☐ (2)	☐ (3)	☐ (4)	☐ (1)	☐ (2)	☐ (3)	☐ (4)
d. Providing faculty workshops and training opportunities related to on-line teaching	☐ (1)	☐ (2)	☐ (3)	☐ (4)	☐ (1)	☐ (2)	☐ (3)	☐ (4)
e. Completing a market analysis to determine and document student demand for distance courses	☐ (1)	☐ (2)	☐ (3)	☐ (4)	☐ (1)	☐ (2)	☐ (3)	☐ (4)
f. Demonstrating the administration's willingness to consider a wide range of views concerning distance education	☐ (1)	☐ (2)	☐ (3)	☐ (4)	☐ (1)	☐ (2)	☐ (3)	☐ (4)
g. Seeking faculty input when developing campus computer networks and technology plans	☐ (1)	☐ (2)	☐ (3)	☐ (4)	☐ (1)	☐ (2)	☐ (3)	☐ (4)
h. Convincing faculty that distance education fits the college/university mission	☐ (1)	☐ (2)	☐ (3)	☐ (4)	☐ (1)	☐ (2)	☐ (3)	☐ (4)
i. Using our academic governance process to achieve consensus on distance education policies and priorities	☐ (1)	☐ (2)	☐ (3)	☐ (4)	☐ (1)	☐ (2)	☐ (3)	☐ (4)
j. Using a strategic planning process to achieve consensus on distance education policies and priorities	☐ (1)	☐ (2)	☐ (3)	☐ (4)	☐ (1)	☐ (2)	☐ (3)	☐ (4)
k. Using administrative authority to pressure or force faculty to teach courses on-line	☐ (1)	☐ (2)	☐ (3)	☐ (4)	☐ (1)	☐ (2)	☐ (3)	☐ (4)
l. Providing special recognition for faculty who teach distance courses on-line	☐ (1)	☐ (2)	☐ (3)	☐ (4)	☐ (1)	☐ (2)	☐ (3)	☐ (4)
m. Providing rewards for distance teaching equal to or greater than those provided for teaching on campus	☐ (1)	☐ (2)	☐ (3)	☐ (4)	☐ (1)	☐ (2)	☐ (3)	☐ (4)

4. Consortium Membership

How has your institution's membership in the SUNY Learning Network consortium affected your distance education activities or resources in the areas listed below? (Check one response on each line.)

	Neutral or Don't Know	Affected Very Negatively	Affected Negatively	Affected Positively	Affected Very Positively
a. Course/program advertising and marketing activities	☐	☐	☐	☐	☐
b. Technological infrastructure required for on-line course delivery	☐	☐	☐	☐	☐
c. Opportunities for training and faculty development in on-line teaching	☐	☐	☐	☐	☐
d. Resources for distance education course development	☐	☐	☐	☐	☐
e. Faculty compensation/rewards for teaching courses on-line	☐	☐	☐	☐	☐
f. Access to distance education experts outside campus	☐	☐	☐	☐	☐
g. Interaction with distance education faculty employed by other colleges	☐	☐	☐	☐	☐
h. Funding to support on-line distance education program	☐	☐	☐	☐	☐
i. Administrative services provided to assist faculty who teach on-line	☐	☐	☐	☐	☐

5. Best Practices

Please enter a brief response to each of the following questions based on your experience as a SUNY faculty member or administrator:

a. What strategies should the academic and administrative leaders of your college/university use to help faculty learn more about teaching distance education courses on-line?

b. What leadership strategies would be most effective in achieving consensus among faculty and administrators regarding distance education policies and priorities?

c. What resources are needed most to support faculty who teach distance education courses on-line through the SUNY Learning Network?

d. What rewards provide the greatest incentive to increase faculty participation in teaching distance education courses on-line? How can we encourage more faculty to teach these courses?

e. What are the advantages and disadvantages associated with your institution's membership in the SUNY Learning Network consortium? How has this consortium affected your work?

6. About Yourself

Please answer the following questions about yourself.

a. I am employed currently at a:

- ☐ SUNY Community College (e.g., Broome)
- ☐ SUNY University College (e.g., Brockport)
- ☐ SUNY University Center (e.g., Binghamton)
- ☐ SUNY College of Technology (e.g., Morrisville)
- ☐ SUNY Specialized College (e.g., Utica-Rome)
- ☐ SUNY Statutory College (e.g., Ceramics)

b. If you are unsure of your college/university classification in question #6a above, you may enter your campus name here: _____

c. I am employed currently as a:

- ☐ College or University President
- ☐ Vice President for Academic Affairs (Chief academic officer)
- ☐ Vice President for Administration/Finance (Chief financial officer)
- ☐ Dean of an Academic Division, School or College
- ☐ Director of Distance Learning Programs
- ☐ Other (specify): _____

Thank you for taking the time to complete this survey!

Informed Consent Form

Title of Study: Encouraging Faculty Participation in College and University Distance Education Programs

Researcher: Robert C. French
176 Windmill Trail
Rochester, New York 14624
Work phone (716) 475-5375
Ph.D. candidate, SUNY at Buffalo

Sponsorship:

This study is an authorized part of the learning productivity research program of the Department of Educational Leadership & Policy at the State University of New York at Buffalo. The study will be conducted under the supervision of Dr. D. Bruce Johnstone, Professor of Higher Education and former Chancellor of SUNY.

Description of Study:

A. The study you will be participating in is intended to examine how academic leaders use various institutional strategies to increase faculty participation in college and university distance education programs. There is an on-going need for empirical examination of these strategies because an increase in faculty participation in distance teaching is essential to the future growth of distance programs.

This study will collect survey data from faculty members who offered one or more Internet-based distance education courses taught on-line through the SUNY Learning Network during the 1998-99 academic year, and from a sample of college administrators at participating SUNY institutions. A second phase of this study will use structured interviews to collect qualitative data from a small sub-set of SUNY faculty and administrators who volunteer to participate in the interview phase. All participants in the study must be 18 years or older.

B. If you agree to participate in the survey phase of this study, you will be asked to:

(1) check the consent to participate box listed below and fill in your name and the date;

(2) respond to a series of multiple choice and open response questions dealing with your perceptions about factors which encourage or discourage faculty participation in teaching distance education courses on-line;

(3) return this Informed Consent Form and your completed survey electronically through a secure web-site established for this study, or by mail to the researcher's address listed above.

C. Your completion of this survey will take about one half-hour total time.

D. If you are asked to participate in the qualitative interview phase of this study and you agree to participate, you will be asked to complete a thirty to forty-five minute structured interview with the researcher that will be conducted on your campus and scheduled at your convenience.

Your Rights as a Participant:

A. You may ask questions about the research procedures used in this study and your questions will be answered. Questions should be directed to Robert C. French at the address and phone number listed above.

B. Your participation is CONFIDENTIAL. Only the investigator will have access to your identity. In the event of publication of this research, no personally identifying information will be disclosed.

C. Your participation is VOLUNTARY. You are free to stop participating at any time without penalty.

D. This study involves no risks to your physical or mental health beyond those encountered in the normal course of everyday life.

E. The researcher will provide you with a summary of the research results of this study upon request.

Agreement to Participate in this Study:

PARTICIPANT: I agree to participate in the research study conducted by Robert C. French, as an authorized part of the education and research program of the State University of New York at Buffalo under the supervision of D. Bruce Johnstone, Ph.D.

I have been fully informed of the nature of the research, any risks that participation may involve, and the uses of any personal information that I will be asked to disclose. I am aware that I may decline to participate in the study at any point during the study, even if I have already started to participate, without penalty. I am aware that my responses will be confidential and no one will have access to my responses except the researcher and his advisor. I am aware that my responses will in no way be used by any individual for the purposes of making a decision about my future, and that I have a right to examine the overall results of the research and any conclusions drawn from these results. I am 18 years or older. I understand that if I am completing this consent form electronically via computer access, I should print out a copy for my records once the agreement to participate box is checked.

☐ I have read and understand the above conditions of this research study and I agree to participate. (Required)

Name (Required):_____

Date (Required): _____

Appendix B

Percent of Faculty Survey Responses in Each Response Category (n=75)

1. Technologies and Teaching

(Please indicate your level of agreement or disagreement with each of the following points.)

The on-line (Internet-based) distance education courses offered by my college/university use technologies and teaching methods that are:

	Don't Know	Strongly Disagree	Disagree	Agree	Strongly Agree
a. Easy to demonstrate to faculty who want to use them	1.3	0.0	13.3	65.3	20.0
b. Too complex for many faculty to understand	2.7	33.3	56.0	8.0	0.0
c. Consistent with traditional faculty values related to higher education	6.7	8.0	13.3	56.0	16.0
d. Likely to increase student access to higher education	0.0	0.0	1.3	49.3	49.3
e. Likely to increase student enrollments at my college/university	6.7	1.3	8.0	52.0	32.0
f. Likely to reduce instructional costs at my college/university	21.3	17.3	28.0	25.3	8.0
g. Likely to increase faculty productivity at my college/university	20.0	12.0	34.7	29.3	4.0
h. Equal in quality to most courses offered on campus	9.3	8.0	12.0	50.7	20.0
i. Better in quality than most courses offered on campus	22.7	10.7	38.7	14.7	13.3

2. Barriers to Faculty Participation

To what extent do the following factors discourage faculty at your college/university from teaching on-line (Internet-based) distance education courses? (Check one response on each line.)

	Don't Know	Not at All	Minor Extent	Moderate Extent	Major Extent
a. Lack of fit with our college/university mission	4.0	57.3	21.3	14.7	2.7
b. Lack of perceived need (e.g., limited student market)	6.7	40.0	24.0	24.0	5.3
c. Lack of support from our college/university administration	2.7	46.7	16.0	24.0	10.7
d. Course or program development costs	5.3	37.3	25.3	22.7	9.3
e. Limitations in technology used for course delivery	4.0	26.7	41.3	17.3	10.7
f. Concerns about faculty workload	4.0	14.7	12.0	40.0	29.3
g. Lack of faculty interest	2.7	14.7	22.7	36.0	24.0
h. Lack of faculty rewards or incentives for teaching distance education courses	2.7	20.0	20.0	26.7	30.7
i. Legal concerns (e.g., intellectual property rights, copyright laws)	8.0	25.3	45.3	14.7	6.7
j. Concerns about quality of courses taught on-line	4.0	6.7	34.7	30.7	24.0
k. Lack of instructional support (e.g., support staff on campus)	1.3	30.7	26.7	25.3	16.0
l. Negative attitudes surrounding use of educational technology (e.g., computers)	4.0	24.0	28.0	30.7	13.3
m. Restrictive academic policies (e.g., testing or grading policies)	6.7	54.7	26.7	9.3	2.7
n. Process for distance education course or program approval	10.7	48.0	21.3	12.0	8.0
o. Other (specify)_____	(67 faculty left question blank or responded "don't know". One listed an additional moderate barrier and seven listed additional major barriers.)				

3. Strategies to Increase Faculty Participation in Distance Education

Strategies to Increase Faculty Participation	A Importance of this strategy **in general or in theory:** 1. neutral or "can't say" 2. not important 3. somewhat important 4. very important				B Effectiveness of this strategy **at your college/university:** 1. neutral or not attempted 2. not effective 3. somewhat effective 4. very effective			
a. Helping faculty connect with distance education experts from other institutions	12.0 (1)	8.0 (2)	48.0 (3)	32.0 (4)	22.7 (1)	13.3 (2)	44.0 (3)	20.0 (4)
b. Providing opportunities to observe other faculty engaged in on-line teaching	5.3 (1)	1.3 (2)	48.0 (3)	45.3 (4)	24.0 (1)	14.7 (2)	45.3 (3)	16.0 (4)
c. Providing excellent instructional support (e.g., staff on campus)	4.0 (1)	1.3 (2)	10.7 (3)	84.0 (4)	16.0 (1)	16.0 (2)	33.3 (3)	34.7 (4)
d. Providing faculty workshops and training opportunities related to on-line teaching	5.3 (1)	4.0 (2)	24.0 (3)	66.7 (4)	10.7 (1)	13.3 (2)	36.0 (3)	40.0 (4)
e. Completing a market analysis to determine and document student demand for distance courses	13.3 (1)	21.3 (2)	37.3 (3)	28.0 (4)	52.0 (1)	24.0 (2)	21.3 (3)	2.7 (4)
f. Demonstrating administration's willingness to consider a wide range of views concerning distance education	17.3 (1)	10.7 (2)	26.7 (3)	45.3 (4)	33.3 (1)	22.7 (2)	22.7 (3)	21.3 (4)
g. Seeking faculty input when developing campus computer networks and technology plans	9.3 (1)	4.0 (2)	48.0 (3)	38.7 (4)	20.0 (1)	29.3 (2)	42.7 (3)	8.0 (4)
h. Convincing faculty that distance education fits the college/ university mission	5.3 (1)	8.0 (2)	41.3 (3)	45.3 (4)	22.7 (1)	21.3 (2)	40.0 (3)	16.0 (4)
i. Using our academic governance process to achieve consensus on distance education policies and priorities	14.7 (1)	16.0 (2)	32.0 (3)	37.3 (4)	45.3 (1)	26.7 (2)	22.7 (3)	5.3 (4)
j. Using a strategic planning process to achieve consensus on distance education policies and priorities	10.7 (1)	20.0 (2)	37.3 (3)	32.0 (4)	45.3 (1)	24.0 (2)	21.3 (3)	9.3 (4)
k. Using administrative authority to pressure or force faculty to teach on-line courses	28.0 (1)	64.0 (2)	5.3 (3)	2.7 (4)	65.3 (1)	30.7 (2)	4.0 (3)	0.0 (4)
l. Providing special recognition for faculty who teach distance courses on-line	8.0 (1)	16.0 (2)	48.0 (3)	28.0 (4)	45.3 (1)	20.0 (2)	22.7 (3)	12.0 (4)
m. Providing rewards for distance teaching equal to or greater than those provided for teaching on campus	4.0 (1)	17.3 (2)	33.3 (3)	45.3 (4)	36.0 (1)	24.0 (2)	25.3 (3)	14.7 (4)

4. Consortium Membership

How has your institution's membership in the SUNY Learning Network consortium affected your distance education programming or activities in the areas listed below? (Check one response on each line.)

	Neutral or Don't Know	Affected Very Negatively	Affected Negatively	Affected Positively	Affected Very Positively
a. Course/program advertising and marketing activities	25.3	0.0	2.7	66.7	5.3
b. Technological infrastructure required for on-line course delivery	20.0	0.0	0.0	44.0	36.0
c. Opportunities for training and faculty development in on-line teaching	10.7	1.3	1.3	42.7	44.0
d. Resources for distance education course development	10.7	1.3	6.7	50.7	30.7
e. Faculty compensation/rewards for teaching courses on-line	44.0	9.3	2.7	34.7	9.3
f. Access to distance education experts outside campus	30.7	1.3	4.0	44.0	20.0
g. Interaction with distance education faculty employed by other colleges	36.0	1.3	1.3	50.7	10.7
h. Funding to support on-line distance education program	45.3	6.7	1.3	26.7	20.0
i. Administrative services provided to assist faculty who teach on-line	32.0	5.3	5.3	33.3	24.0

Appendix C

Percent of Administrator Survey Responses in Each Response Category (n=43)

1. **Program Goals**

Distance Education Goals	A **Importance For Your College/University** 1. not important 2. somewhat important 3. very important			B **Extent Goal Met Through SUNY Learning Network:** 1. not at all 2. minor extent 3. moderate extent 4. major extent			
a. Increasing student access by making courses available at convenient locations	0.0 (1)	27.9 (2)	72.1 (3)	0.0 (1)	41.9 (2)	51.2 (3)	7.0 (4)
b. Making educational opportunities more affordable for students	27.9 (1)	23.3 (2)	48.8 (3)	37.2 (1)	30.2 (2)	32.6 (3)	0.0 (4)
c. Increasing your institution's enrollment	7.0 (1)	25.6 (2)	67.4 (3)	14.0 (1)	48.8 (2)	37.2 (3)	0.0 (4)
d. Increasing student access by reducing time constraints for course taking	11.6 (1)	23.3 (2)	65.1 (3)	7.0 (1)	27.9 (2)	62.8 (3)	2.3 (4)
e. Reducing your institution's per student costs of instruction	34.9 (1)	37.2 (2)	27.9 (3)	67.4 (1)	25.6 (2)	4.7 (3)	2.3 (4)
f. Increasing institution's access to new audiences	4.7 (1)	16.3 (2)	79.1 (3)	16.3 (1)	48.8 (2)	25.6 (3)	9.3 (4)
g. Improving the quality of course offerings	18.6 (1)	25.6 (2)	55.8 (3)	23.3 (1)	41.9 (2)	25.6 (3)	9.3 (4)
h. Meeting the needs of local employers	14.0 (1)	32.6 (2)	53.5 (3)	44.2 (1)	39.5 (2)	14.0 (3)	2.3 (4)
i. Other (specify) _____ _____	(Five administrators identified other goals.)						

2. Barriers to Faculty Participation

To what extent do the following factors discourage faculty at your college/university from teaching on-line (Internet-based) distance education courses? (Check one response on each line.)

	Don't Know	Not at All	Minor Extent	Moderate Extent	Major Extent
a. Lack of fit with our college/university mission	4.7	46.5	27.9	18.6	2.3
b. Lack of perceived need (e.g., limited student market)	7.0	23.3	30.2	25.6	14.0
c. Lack of support from our college/university administration	2.3	46.5	18.6	18.6	14.0
d. Course or program development costs	2.3	23.3	37.2	23.3	14.0
e. Limitations in technology used for course delivery	4.7	25.6	48.8	14.0	7.0
f. Concerns about faculty workload	7.0	9.3	18.6	18.6	46.5
g. Lack of faculty interest	2.3	7.0	25.6	48.8	16.3
h. Lack of faculty rewards or incentives for teaching distance education courses	2.3	14.0	27.9	27.9	27.9
i. Legal concerns (e.g., intellectual property rights, copyright laws)	4.7	18.6	39.5	25.6	11.6
j. Concerns about quality of courses taught on-line	2.3	4.7	34.9	46.5	11.6
k. Lack of instructional support (e.g., support staff on campus)	2.3	23.3	51.2	9.3	14.0
l. Negative attitudes surrounding use of educational technology (e.g., computers)	2.3	23.3	39.5	27.9	7.0
m. Restrictive academic policies (e.g., testing or grading policies)	7.0	62.8	25.6	2.3	2.3
n. Process for distance education course or program approval	4.7	48.8	27.9	16.3	2.3
o. Other (specify)_____	(37 of 43 administrators responding to the survey left this question blank.)				

3. Strategies to Increase Faculty Participation in Distance Education

Strategies to Increase Faculty Participation	A Importance of this strategy **in general or in theory:** 1. neutral or "can't say" 2. not important 3. somewhat important 4. very important				B Effectiveness of this strategy **at your college/university:** 1. neutral or not attempted 2. not effective 3. somewhat effective 4. very effective			
a. Helping faculty connect with distance education experts from other institutions	4.7 (1)	9.3 (2)	72.1 (3)	14.0 (4)	30.2 (1)	11.6 (2)	53.5 (3)	4.7 (4)
b. Providing opportunities to observe other faculty engaged in on-line teaching	2.3 (1)	2.3 (2)	65.1 (3)	30.2 (4)	18.6 (1)	11.6 (2)	55.8 (3)	14.0 (4)
c. Providing excellent instructional support (e.g., staff on campus)	0.0 (1)	0.0 (2)	23.3 (3)	76.7 (4)	9.3 (1)	7.0 (2)	41.9 (3)	41.9 (4)
d. Providing faculty workshops and training opportunities related to on-line teaching	0.0 (1)	0.0 (2)	25.6 (3)	74.4 (4)	14.0 (1)	11.6 (2)	51.2 (3)	23.3 (4)
e. Completing a market analysis to determine and document student demand for distance courses	18.6 (1)	16.3 (2)	30.2 (3)	34.9 (4)	53.5 (1)	25.6 (2)	20.9 (3)	0.0 (4)
f. Demonstrating administration's willingness to consider a wide range of views concerning distance education	7.0 (1)	7.0 (2)	46.5 (3)	39.5 (4)	23.3 (1)	14.0 (2)	60.5 (3)	2.3 (4)
g. Seeking faculty input when developing campus computer networks and technology plans	2.3 (1)	2.3 (2)	37.2 (3)	58.1 (4)	14.0 (1)	7.0 (2)	48.8 (3)	30.2 (4)
h. Convincing faculty that distance education fits the college/ university mission	0.0 (1)	4.7 (2)	20.9 (3)	74.4 (4)	16.3 (1)	18.6 (2)	51.2 (3)	14.0 (4)
i. Using our academic governance process to achieve consensus on distance education policies and priorities	16.3 (1)	9.3 (2)	39.5 (3)	34.9 (4)	44.2 (1)	27.9 (2)	25.6 (3)	2.3 (4)
j. Using a strategic planning process to achieve consensus on distance education policies and priorities	9.3 (1)	7.0 (2)	46.5 (3)	37.2 (4)	37.2 (1)	11.6 (2)	51.2 (3)	0.0 (4)
k. Using administrative authority to pressure or force faculty to teach on-line courses	23.3 (1)	53.5 (2)	20.9 (3)	2.3 (4)	65.1 (1)	18.6 (2)	14.0 (3)	2.3 (4)
l. Providing special recognition for faculty who teach distance courses on-line	4.7 (1)	4.7 (2)	48.8 (3)	41.9 (4)	30.2 (1)	9.3 (2)	51.2 (3)	9.3 (4)
m. Providing rewards for distance teaching equal to or greater than those provided for teaching on campus	14.0 (1)	16.3 (2)	27.9 (3)	41.9 (4)	30.2 (1)	14.0 (2)	39.5 (3)	16.3 (4)

4. Consortium Membership

How has your institution's membership in the SUNY Learning Network consortium affected your distance education programming or activities in the areas listed below? (Check one response on each line.)

	Neutral or Don't Know	Affected Very Negatively	Affected Negatively	Affected Positively	Affected Very Positively
a. Course/program advertising and marketing activities	41.9	0.0	2.3	51.2	4.7
b. Technological infrastructure required for on-line course delivery	34.9	0.0	2.3	4.4	18.6
c. Opportunities for training and faculty development in on-line teaching	16.3	0.0	9.3	51.2	23.3
d. Resources for distance education course development	27.9	0.0	11.6	44.2	16.3
e. Faculty compensation/rewards for teaching courses on-line	39.5	2.3	14.0	32.6	11.6
f. Access to distance education experts outside campus	44.2	0.0	2.3	44.2	9.3
g. Interaction with distance education faculty employed by other colleges	60.5	0.0	4.7	30.2	4.7
h. Funding to support on-line distance education program	30.2	0.0	11.6	39.5	18.6
i. Administrative services provided to assist faculty who teach on-line	25.6	0.0	11.6	48.8	14.0

Appendix D

Guiding Questions for Interview Sessions

Begin all interview sessions by explaining the purpose of the study. Ask for permission to tape record the interview. Inform the participant that quotations will not be attributed to them by name if used in this study. Proceed to ask the questions below.

Faculty Interview Questions

1. Help me trace the history of the SUNY Learning Network program on this campus. Who initiated the program?
2. What motivated you to begin teaching on-line courses?
3. How did you learn to teach effectively at a distance? What was it like teaching your first class? What training strategies should academic leaders use?
4. How would you compare the quality of the learning experience for distance students versus those on-campus?
5. What do your faculty colleagues think about your involvement in distance education? What do they think about the quality of distance education courses?
6. How does developing a new distance learning course compare with developing an on-campus course?
7. What would you identify as the most important concern that faculty have about teaching on-line? What factors might discourage participation?
8. What are the main goals that this college (university) hopes to achieve by participating in the SUNY Learning Network?

9. What resources are needed most to support faculty who teach on-line?
10. What rewards provide the greatest incentive for faculty to become involved in teaching on-line? How can we encourage more faculty to teach these courses?
11. How would you describe the college's "decision-making process" in the area of distance education? Have there been efforts to build consensus regarding policies and priorities?
12. What do you see as the advantages and disadvantages of your institution's membership in the SUNY Learning Network?

Administrator Interview Questions

1. Help me trace the history of the SUNY Learning Network program on this campus. Who initiated the program?
2. How was the first group of faculty chosen? Was there a reason to start with a specific department?
3. What are the main goals that the college (university) hopes to achieve by participating in the SUNY Learning Network? What are the driving forces?
4. What are the barriers to faculty teaching on-line? What factors discourage participation?
5. What strategies should be used to help faculty learn about teaching on-line?
6. What resources are needed most to support faculty who teach on-line?
7. What rewards provide the greatest incentive to increase faculty participation? How can we encourage more faculty to teach on-line?
8. What are some of the policies you have in place to provide incentives for faculty to participate (e.g. stipends, Internet access, etc.)?

9. What leadership strategies have been used to help your faculty and administration achieve consensus regarding distance education policies and priorities? How would you describe the decision-making process?
10. What do you see as the advantages and disadvantages of your institution's membership in the SUNY Learning Network?

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