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Overcoming Barriers: How Community College Faculty Successfully Overcome Barriers to Participation in Distance Education

Matthew Meyer
Old Dominion University

OVERCOMING BARRIERS: HOW COMMUNITY COLLEGE FACULTY SUCCESSFULLY OVERCOME BARRIERS TO PARTICIPATION IN DISTANCE EDUCATION

by

Matthew Meyer
B.S., December 1989, Mechanical Engineering
M.S., December 1992, BioEngineering

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Approved by:

Gary Morrison (Chair)

Ginger Watson (Member)

Philip Reed (Member)

ABSTRACT

OVERCOMING BARRIERS: HOW COMMUNITY COLLEGE FACULTY SUCCESSFULLY OVERCOME BARRIERS TO PARTICIPATION IN DISTANCE EDUCATION

Matthew R. Meyer
Old Dominion University, 2012
Chairperson: Dr. Gary Morrison

To determine the primary barriers encountered by community college faculty in participating in distance education, community college faculty and administrators from community colleges in North Carolina and Virginia were surveyed using both quantitative and qualitative methods. Two separate online surveys were provided to faculty and distance education administrators (including chief academic officers) that included demographic questions and barrier assessment questions for both groups. Follow-up interviews were conducted among faculty and administrators at colleges that self-reported having successful or poorly performing distance education programs. To further frame the attributes of faculty participators and non-participators in distance education, the diffusion of innovations theory (Rogers, 1995) was used to assess the survey results.

The results showed that the faculty group that engage in distance education tend to be individuals with full-time status, possessing significant amount of community college teaching experience, and possessing characteristics that align themselves closely with innovators and early adopters of innovations as described by the diffusion of innovations theory. Conversely, faculty with less college teaching experience and tendencies of early and late majority types relative to adoption of innovations or technology were shown to not engage in distance education.

The faculty reported that the main obstacles to participation in distance education included 'faculty workload', 'lack of faculty compensation', 'the quality of students', 'additional responsibilities', 'the quality of distance courses', and 'the strong need for direct in-class contact with students' as the major barriers to their participation in distance education. The study showed that administrators feel the biggest barrier to faculty participation is the lack of a strong technological background. The results of the survey also revealed that two categories of barriers to participation in distance education that were not reported in the literature, 'philosophy and belief' and 'no opportunity'.

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CHAPTER I

INTRODUCTION

Institutions that choose to rely on their full and part-time faculty to develop courses necessary to expand the institution's distance education enrollments rather than outsourcing their distance education offerings face a myriad of issues perceived as barriers to faculty. Considering four year institutions, obstacles to involvement in teaching and development of distance courses perceived by faculty have been categorized into extrinsic (policy, procedures, and technology support), intrinsic (attitude, motivations, and self-confidence), and personal barriers such as age, family situation, or background (Oomen-Early & Murphy, 2009, Rezebek, 1999; Schifter, 2002). Multiple studies have suggested that the same constraints inhibit faculty success in distance learning (Berge & Muilenburg, 2001; Cook, Crawford & Warner, 2008; Muilenburg & Berge, 2001; Orr, 2008; Porter, 2003; Tabata & Johnsrud, 2008). Building upon the research conducted on four-year institutions, one study looked specifically at the barriers perceived by faculty at community colleges. This study suggested that faculty from community colleges differed slightly from four-year colleges and universities by reporting personal barriers and time constraints as more significant to their participation in distance education than many extrinsic and intrinsic barriers identified by faculty at four-year institutions (Hayward-Wyzik, 2009).

Administrators at universities have differing views of the obstacles that impact faculty participation in distance education when compared to community college administrators. A recent study of distance education administrators at universities pointed

to an extrinsic barrier, intellectual property policy, as one of the leading issues concerning distance education at their respective institutions (Schauer et al., 2005). Conversely, community college distance education administrators rated institutional policies low as a constraint and instead rated faculty interest and expertise as greater barriers to the implementation of distance education at their institutions (Benson et al., 2008).

Differences also exist between faculty and administrators at community colleges. In a study of rural community colleges, administrators were more concerned with institutional extrinsic barriers such as a lack of policies than were faculty (Hayward-Wyzik, 2009). Differences have also shown up in philosophies regarding unaffiliated distance education providers, that is, for profit companies that offer or manage distance offerings. Faculty have successfully blocked some university administrators' plans to partner with outside vendors citing the potential for decreased course rigor and the proliferation of courses that lack personal contact between faculty and students (Stripling, 2009).

Understanding the characteristics or attributes of an institution's faculty may assist some administrators in developing policy regarding distance education. Researchers investigating technology adoption of medical faculty found that identifying the differences between those faculty who adopt and engage in distance education and those who have been hesitant or resistant to engaging in distance education lead to the understanding that different approaches are needed to bridge the gap among groups of faculty in the diffusion of instructional technology (Zayim, Yildirim, & Saka, 2006).

Many investigators have used Rogers' (1995) diffusion of innovation theory to explore the social and psychological characteristics involved in an individual's adoption of technology such as the technology used in developing and the delivery of distance education (Ely, 1999; Holloway, 1996; Surry & Brennan, 1998, Tabata & Johnsrud, 2008; Zayim, Yildirim, & Saka, 2006). In the field of educational technology, diffusion theory has most often been applied to the study of either artifacts, such as computers, or knowledge, such as distance education techniques (Holloway, 1996).

Using the diffusion of innovations theory concepts as a framework for the investigation, this study will expand upon the research into extrinsic, intrinsic, and personal barriers of implementing distance education in community colleges and identify attributes of faculty and the practices of institutions that may lead to greater faculty adoption and participation in distance education.

Limitations and Delimitations

The following limitations and delimitations are applicable to this study.

1. All new data used in the study was self-reported.
2. The study was not designed to predict or analyze cause and effect relationships between perceived barriers and actual participation in distance education.
3. The study treated data from full-time faculty and part-time faculty equally.
4. The study treated data from rural and urban colleges located in Virginia and North Carolina equally.
5. The conclusions of this study are not necessarily generalizable to other institutions, community college systems, or populations.

Definition of Terms

For the purpose of this study, the following operational definitions are used.

1. Asynchronous learning involves classroom communication that can take place anytime and at irregular intervals
2. Diffusion of Innovation is a theory presented in the book *Diffusion of Innovation* by Everett Rogers (1995) that defines diffusion as the process by which an innovation is communicated through various networks over time among the members of a social system.
3. Distance education is defined as the technological separation of teacher and learner which frees the student from the necessity of traveling to "a fixed place, at a fixed time, to meet a fixed person, in order to be trained" (Keegan, 1995, p. 7).
4. Extrinsic barriers include those that are related to the institution such as technology support, access, policies (legal issues or intellectual property), administrative structure, organizational change, or workload demands.
5. Faculty participator in distance education is a faculty member who is currently teaching or developing a distance education course or who has taught or developed a distance education within the last three years from the data of the survey.
6. Faculty non-participator in distance education is a faculty member who is not and has not taught or developed a distance education course within the last three years from the date of the survey.

7. Intrinsic barriers are those that are closely associated with the instructor's inner motivations and fear such as previous distance learning experience, fear of technology, or lack of recognition.
8. Personal barriers may include age, gender, or family situation.
9. Synchronous learning is communication and learning in which faculty and students communicate and learn at the same time but different locations.
10. Viable Distance Education Programs are those that have at least 80% of their faculty participating in distance education and at least 101 or more distance course offerings each semester.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

Distance education is defined as the technological separation of teacher and learner which frees the student from the necessity of traveling to "a fixed place, at a fixed time, to meet a fixed person, in order to be trained" (Keegan, 1995, pg. 7). Distance education can include both synchronous (communication and learning in which faculty and students communicate and learn at the same time but different locations) and asynchronous learning (classroom communication that can take place anytime and at irregular intervals). For the purpose of this study, faculty participation in distance education will include both development and teaching of distance courses in both synchronous and asynchronous environments.

Factors Driving Growth of Distance Education

A number of contributing factors in higher education such as increasing enrollments, a new generation of learners, and tightening of higher education budgets, are driving the growth and expanding importance of distance education now and into the next several decades.

Distance education is a delivery format for learning that has been around for many decades. However, the advent of the Internet has resulted in an explosion of interest in distance learning since the 1990's. A report from the National Center for Education Statistics shows that the number of courses taught and their enrollments have nearly doubled each year from 1995 through 2006 (Parsad & Lewis, 2008). In 2008, a survey of

190 community colleges revealed that 88% of those surveyed expect moderate to large increases in distance learning enrollments. This anticipated growth was consistent across institutions location, region, and size (Benson et al., 2008). This growth is in response to both increasing numbers of students enrolling in universities and colleges who prefer online courses and the need to accommodate more students with fewer resources in higher education (Gaytan, 2007). From 2006 to 2017, the National Center for Education Statistics also projects a rise of 10% in enrollments at institutions of higher education of students under 25, and an increase greater than 19% in enrollments of students 25 and over (Snyder, Dillow, & Hoffman, 2009). Similarly, researchers reported that community college distance learning offerings are attracting more working professionals, employed students, single parents, and part-time students (Benson et al., 2008).

The current recessionary economic climate has resulted in the dwindling financial resources available to public universities and colleges through state and federal appropriations. During poor economic times, states' revenue decreases due to decreases in business tax revenue and personal income tax revenue. State governments balance budgets by cutting programs and appropriations to all agencies, including higher education (Callan, 2002). The results from the recession in the early 1990s raised the prospect that reductions in appropriations would turn out to represent a long-lasting decrease in support for higher education, rather than a temporary adjustment to cyclical state fiscal problems (Kane, Orszag, & Gunter, 2003).

Distance education poses an attractive strategy for universities and colleges to combat decreasing support. Capital investments in distance learning usually substitute for

high recurrent costs of traditional courses, making economies of scale a decisive factor. Large distance-learning programs may produce graduates at considerably lower costs than conventional means (Valentine, 2002).

The combination of factors impacting higher education today, increased enrollment, new generation of learners, and decreased appropriations, mean that a greater number of faculty will need to both develop and teach distance learning courses. To encourage and support faculty in participating in distance education, barriers to participation must be overcome by emulating current successful distance education programs enterprises and developing policy that support and not impede distance learning endeavors. Additionally, understanding why people use educational technology or why they don't is extremely important in developing distance education programs that engage a larger proportion of the mainstream faculty at an institution. The next sections will explore both the barriers to participation and the diffusion of innovations relative to distance education.

Barriers to Participation

Many researchers have studied barriers to participation in distance education (Berge, 1998; Berge et al, 2002; Berge and Muilenburg, 2000; Berge and Muilenburg, 2001; Berge and Mrozowski, 1999; Muilenburg and Berge, 2001; Rezabek, 1999; Tabata & Johnsrud, 2008). These investigations have identified 64 factors that inhibit organizations from adopting distance education (Berge et al., 2002; Muilenburg and Berge, 2001). Berg et al. (2002) reviewed 32 case studies involving distance education

and determined that 10 of the 64 factors identified previously appear to be critical to participation in online learning than the other factors. These factors include:

- technical expertise
- administrative structure
- organizational change
- evaluation and effectiveness
- social interaction or previous experience
- student support services
- threat or fear of technology
- access
- faculty compensation, time, and recognition
- legal issues

These 10 obstacles to participation in distance education have been categorized in previous studies into three groups. "Intrinsic barriers" are those that are closely associated with the instructor's inner motivations and fear such as previous distance learning experience, fear of technology, or lack of recognition (Parker, 2003; Wolcott, 1999). "Extrinsic barriers" include those that are related to the institution such as technology support, access, policies (legal issues or intellectual property), administrative structure, organizational change, or workload demands (Rockwell et al., 1999). "Personal barriers" were shown to be important by several studies and include age, gender, or family situation (Hayward-Wyzik, 2009; Schifter, 2002; Tabata & Johnsrud, 2008).

Intrinsic barriers turned to the positive can become intrinsic motives. Schifter (2002) demonstrated that experienced distance learning faculty engaged in online learning courses primarily for intrinsic motives such as intellectual challenge and recognition by peers for the quality of their work. Similar results were demonstrated by researchers who conducted focus groups of faculty from three research universities. Their results revealed that the primary motivators were flexibility of schedule, interest in new technology and job satisfaction (Hiltz, Shea, & Kim, 2007).

Extrinsic barriers have been some of the most commonly studied and reported barriers to participation in distance education (Hayward-Wyzik, 2009; Hiltz, Shea, & Kim, 2007; Oomen-Early & Murphy, 2009; Orr, 2008; Quinn & Corry, 2002; Rockwell et al., 1999). The extrinsic barriers of release time, workload, technical support, and compensation have been identified as the most important obstacles in several studies (Chen, 2009; Oomen-Early & Murphy, 2009).

Schifter (2002) identified a lack of research on personal barriers in the literature and chose to study how personal barriers affected experienced and inexperienced faculty. Schifter suggested that younger more junior faculty may be more adept at the use of technology and therefore more likely to engage in distance education; but they may also come into conflict with personal barriers such as time as they focus on their families and careers. Hayward-Wyzik (2009) found that these same barriers were predominant among the perceptions of faculty. The obstacles were classified as dispositional barriers, and included an individual's background, attitude, age, or self-confidence. The study also

found that the colleges largely ignored the personal barriers perceived by faculty, failing to respond with support (Hayward-Wyzik, 2009).

Differences in the perceptions of obstacles to participation in distance education have been revealed between administrators and faculty, and between university faculty and community college faculty. One study found administrators and faculty differed on support from leadership and technical support (Yu, 2008). The administrators indicated that leadership and technical support was provided and did not perceive it as an obstacle for faculty participating in distance education. Furthermore, several studies have found that administrators do not fully comprehend the motivations of faculty, but they do have strong feelings toward perceived barriers and inhibitors (Betts, 1998; Schifter, 2002; Yu, 2008)

Studies focusing on university faculty or community college faculty have revealed interesting, but somewhat opposing results. In one study of urban four-year universities, the major constraints uncovered through faculty interviews were related to leadership, intellectual property rights, compensation, and technological issues (Orr, 2008). Orr's (2008) study supports the findings in other investigations of university faculty (Berge et al, 2002; Betts, 1998; Mitchell & Geva-May, 2009; Muilenburg & Berge, 2001; Parker, 2003) where extrinsic barriers are identified as important. However, the data gathered on community colleges only partially reflects the data gathered at four-year universities. The perceived barriers described by faculty in a study of rural community colleges were personal barriers and barriers of time (Hayward-Wyzik, 2009). In another study that analyzed 116 faculty responses to a survey on barriers; workload, compensation, and time

were identified as the top inhibitors to participation in distance education (O'Quinn & Corry, 2002). Extrinsic barriers like intellectual property rights and technological issues where not seen as barriers by community college faculty.

In 1996, the North Carolina Community College System studied the challenges and opportunities associated with distance learning technology in order to identify the perceived problem areas and concerns related to implementing the technology. Using survey results from 482 faculty and administrators, the researchers found that the major barriers and obstacles to implementing distance education was lack of funding, equipment, and training. Administrators specifically perceived that a lack of funding was the major obstacle to implementing distance education (Randall & Bishop, 1996).

Diffusion of Innovations Theory

Understanding the types of barriers that impede faculty from engaging in distance education is only one step in the process of developing solutions to support and encourage faculty to participate in distance education. Researchers need to also consider the factors that influence the adoption of a new innovative technology or process (also known as diffusion of innovation) which include the innovation itself, how information about the innovation is communicated, time, and the nature of the social system into which the innovation is being introduced (Rogers, 1995). Diffusion theories seek to explain how these major factors, and a multitude of other factors, interact to facilitate or impede the adoption of a specific product or practice among members of a particular adopter group. In the book *Diffusion of Innovations* by Rogers (1995), four components

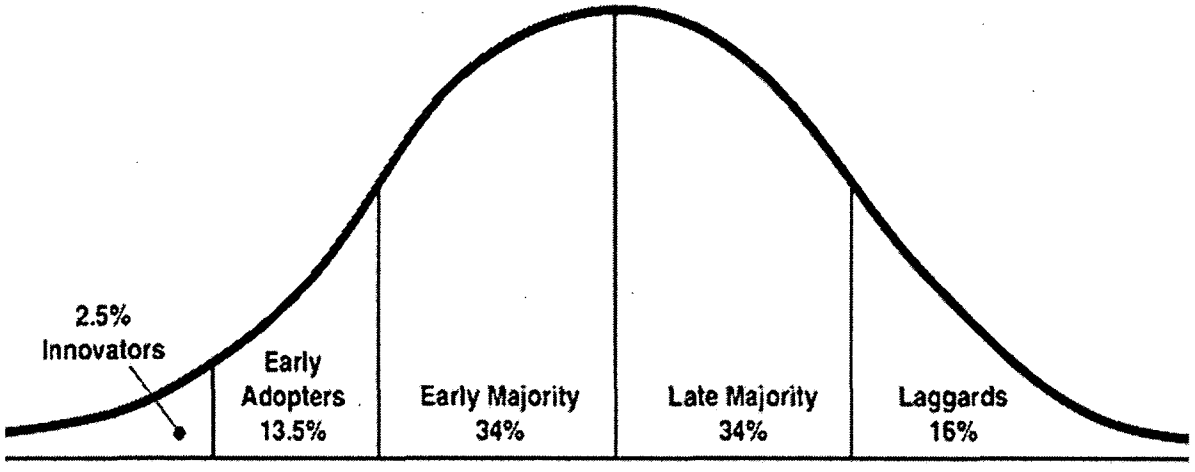
are discussed: innovation decision process; individual innovativeness; rate of adoption; and perceived attributes.

The innovation decision process states that diffusion is a process that occurs over time and can be seen as having five distinct stages. The stages in the process are knowledge, persuasion, decision, implementation, and confirmation. According to this theory, potential adopters of an innovation must learn about the innovation, be persuaded as to the merits of the innovation, decide to adopt, implement the innovation, and confirm (reaffirm or reject) the decision to adopt the innovation.

The individual innovativeness concept states that, for any given innovation, a certain percentage of the population will readily adopt the innovation, while others will be less likely to adopt. According to Rogers (1995), there is usually a normal distribution of the various adopter categories that forms the shape of a bell curve as shown in Figure 1. "Innovators", those who readily adopt an innovation, make up about 2.5% of any population. "Early adopters" make up approximately 13.5% of the population. Most people will fall into either the early majority (34%) or the late majority (34%) categories. "Laggards", those who will resist an innovation until the bitter end, comprise about 16% of the population. The concept of adopter categories is important because it shows that all innovations, like distance education, go through a natural, statistically predictable, and sometimes lengthy process before becoming widely accepted and implemented within a population.

Figure 1

Diffusion of Innovations Types (Rogers, 1995)



The third diffusion concept discussed by the Diffusion of Innovation theory is the rate of adoption. The rate of adoption states that innovations are diffused over time in a pattern that resembles an s-shaped curve. Rate of adoption predicts that an innovation goes through a period of slow, gradual growth before experiencing a period of relatively dramatic and rapid growth. Following the period of rapid growth, the innovation's rate of adoption will gradually stabilize and eventually decline.

The final component of the diffusion on innovation theory is the perceived attributes that suggests potential adopters judge an innovation based on their perceptions in regard to five attributes of the innovation. These attributes are: trialability; observability; relative advantage; complexity; and compatibility. According to the theory an innovation will experience an increased rate of diffusion if potential adopters perceive that the innovation: (a) can be tried on a limited basis before adoption, (b) offers

observable results, (c) has an advantage relative to other innovations (or the status quo), (d) is not overly complex; and (e) is compatible with existing practices and values.

Researchers have incorporated diffusion theory into distance educational applications. Stockdill and Morehouse (1992) used diffusion concepts in a model for a checklist of factors to consider when attempting to increase the adoption of distance learning and other educational technologies. Other researchers used diffusion theory to identify and analyze factors that might impede or assist the adoption of instructional innovations within organizations (Farquhar & Surry, 1994). Studies of diffusion and adoption have helped to explain the what, where, and why of technology acceptance or rejection in education (Holloway, 1996).

In one study, researchers using Rogers' diffusion of innovation theory as a framework, investigated faculty participation in distance education in relation to their use of and attitudes about technology (Tabata & Johnsrud, 2008). The survey used four key dimensions to determine faculty participation in distance education: technology use, attitude toward technology, attitude toward distance education, and adoption of innovations.

The researchers identified several variables that had a strong effect on predicting if faculty members would participate in distance education. These included the importance of using software and e-resources, having solid technology skills, and believing that distance education can be as good as face-to-face instruction. The researchers also determined that older faculty members were more likely to take on distance education instruction, than younger faculty (Tabata & Johnsrud, 2008).

The literature describes a perfect storm of conditions that will increase the demand for distance learning courses and programs at our universities and community colleges. To meet the expanding demand, institutions must enlist and motivate their faculty to both develop and teach online courses. Administrators need to understand the predominant barriers to faculty participation in distance education, and how faculty attributes hinder or encourage diffusion of distance education technology. The knowledge obtained from understanding barriers and faculty attributes will assist administrators in developing policy and practices that work to support greater faculty participation in distance education.

Research Questions

This study will expand upon previous research conducted on universities and rural community colleges to include both rural and urban community colleges across two state systems. This study will be guided by the following research questions.

1. What are the common attributes of community college faculty who engage or do not engage in distance education teaching?
2. What is the work load for those teaching distance education courses including number of courses taught and hours per week?
3. Does training or proficiency with technology impact the decision to teach distance courses?
4. What reasons are given for not teaching distance courses?

5. What are the predominant barriers perceived by faculty participators, non-participators and distance education administrators at community colleges to the implementation of distance education?
6. How do the ratings of barriers among participators and non-participators, participators and administrators, and non-participators and administrators compare?
7. How many community colleges among the sample population have viable distance education programs?
8. How have community colleges with viable distance education programs helped their faculty to overcome barriers to participating in distance education?

CHAPTER III

METHODS

Introduction

This mixed-methods study utilized survey and interview data of faculty and community college administrators to expand upon the understanding of the barriers that inhibit community college faculty participation in distance education and to learn how colleges with successful distance education programs have helped their faculty overcome inhibitors to participation.

Participants

Participants were faculty and administrators from the community college systems in the states of Virginia and North Carolina. The Virginia Community College System consists of 23 colleges that offer an associate degree, certification programs, and non-degree workforce training serving nearly 400,000 students. The 23 colleges also serve students interested in transfer programs to baccalaureate institutions. The North Carolina Community College System includes 58 comprehensive colleges which serve more than 800,000 students in degree and non-degree education and workforce programs. The total combined population of faculty and distance education administrators from the two systems is 12,294 and 158 administrators. Criteria established to ensure the sample that was electronically surveyed represented the population of interest were:

- Geographical location: urban and rural community colleges in North Carolina and Virginia.

- Full or part-time faculty with at least three years of experience (Orr, 2008; Hayward-Wyzik, 2009).
- Distance education administrator, senior academic officers, information technology directors, campus provost, and academic deans involved in the management and implementation of technology to support distance learning at institutions included in the study.

Additionally, the criteria for the faculty members for the qualitative portion (interviews) of the study included:

- Instruct in degree programs and teach four or more courses in a semester (workload and time barrier)
- Possess a non-educational technology background (technology barrier),
- Have never received special funding to assist them in the development or delivery of distance learning (funding barrier)
- Willing to participate

These characteristics were selected for the qualitative portion of the study to assist the researcher in isolating some of the variables that have been shown to have significant impact on faculty participation in distance education (Betts, 1998, Maguire, 2005).

All administrators and faculty were sent an e-mail invitation with electronic links to the online surveys for the study. Demographic information was collected from the survey and any faculty not meeting the criteria listed above was removed from the data sets.

Survey

Two electronic surveys, a faculty survey and an administrator survey, were used to collect data on perceived barriers. The surveys were based upon the perceived barriers as determined in previous studies (Berge, 1998; Betts, 1998; Rezabek 1999, Berge & Mrozowski, 1999; Berge & Muilenburg, 2000; Berge & Muilenburg, 2001; Muilenburg & Berge, 2001; Cho & Berge, 2002; Bruner, 2007; Orr, 2008) and two surveys constructed for faculty and administrators by Betts (1998). Modifications to the faculty survey included updating the language of the survey to adhere to the characteristics of community college faculty since the original survey was designed for university faculty. Specific modifications included dropping three demographic questions and three assessment questions that referred to the original author's institution or changing the language to say "your community college". Furthermore, questions that had referred to a faculty members' department (for example the School of Law or School of Medicine) were modified to use language like "community college department or community college program".

The resulting faculty survey consists of 2 sections: one that solicited demographic information about the faculty member, and the other that asked the faculty member to rate perceived barriers to distance education. The demographic section of the survey consisted of 18 items categorizing the faculty respondent's age, gender, general and distance teaching experience, computer skill, and comfort levels with various distance technologies. The perceived barrier section of the survey contained 19 potential obstacles to distance education grouped into extrinsic (6 items), intrinsic (10 items), and

personal (3 items) items that are rated on a five-point Likert scale ranging from strongly agree to strongly disagree. The subscales scores for each respondent were calculated as the average of all items in that subscale. The perceived barrier section also includes one open-response item asking respondents to list any additional barriers they have encountered. The full surveys, including demographic portions, are located in appendices A and B.

Distance education administrators were also sent a modified version of the instrument constructed by Betts (1998) for university distance learning administrators. The modifications involved wording questions to address distance education barriers from the point of view of a community college distance education administrator. A total of three questions that referred to the original author's institution and tenure were dropped. Questions that had referred to specific "Schools" were modified to more general language (e.g. "community college department or community college program").

Similar to the faculty survey, the distance administrator survey consisted of 2 sections: one that solicited demographic information about the administrator and the other that asked the administrator to rate perceived barriers to distance education. The demographic section of the survey consisted of 9 demographic items categorizing the administrator respondent's age, gender, general and distance education experience, computer skill, comfort levels with various distance technologies, and general information on their college's distance education faculty. The perceived barrier section of the survey contained 19 potential barriers to distance education grouped into extrinsic (6 items), intrinsic (10 items), and personal (3 items) items that are rated on a five-point

Likert scale ranging from strongly agree to strongly disagree and one open-response item asking respondents to list any additional barriers they have encountered. The full surveys, including demographic portions, are located in appendices C and D.

While constructing the original instrument Betts (1998) conducted a modified Delphi study. She interviewed individuals with and without experience in distance learning to determine the survey construct. Cronbach alpha reliability coefficients for the final surveys administered during the pilot study were .94 (Betts, 1998). To determine the reliability of the modified survey instruments in this study, a pilot administration was given to a group of thirty faculty members and eight administrators. Cronbach alpha reliability coefficients were .90 and .92 respectively for the faculty and administrator surveys.

The instrument was also provided to subject-matter experts in the field of distance learning in the fall of 2010 to ensure construct-related validity evidence of the instrument (Patton, 1990). The researcher explained the constructs of the study to the experts and then allowed them to examine the survey to confirm that the specific questions would indeed measure the constructs. The researcher met individually with both subject matter experts following their review. Their reviews resulted in only minor wording edits but no substantial changes to the instrument. The subject-matter experts were the Associate Vice President for Learning Technology at the North Carolina Community College System, and the Director of North Carolina Community College's Virtual Learning Community.

Interview

Interviews with individual faculty members and administrators were conducted to help the researcher examine in depth the informative context on the participant college's distance education strategies relative to policies, practices, processes, and institutional support (LeCompte, Millroy, & Preissle, 1992). List of faculty from appropriate colleges as defined in the procedures section were randomly created from the email contact list. The faculty members were then contacted via email in sequence from the randomized list until interview participants were identified meeting the above criteria. The semi-structured interview consisted of 15 open-ended questions that were recorded in private, phone interviews. The questions examined the participants' motivations and reasons for engaging in distance education and/or how their institution may have helped remove any barriers to participation in distance education. The distance education administrators at each of the same colleges were also interviewed and asked about how they have removed barriers to participation or about special policies put into place to encourage faculty to participate in distance education. The faculty and distance education administrator interview instruments are located in appendices E and F, respectively.

A draft of the interview questions was developed based upon the recommendations and observations of previous studies (Muilenburg & Berge, 2001; Cho & Berge, 2002; Bruner, 2007; Orr, 2008; Hayward-Wyzik, 2009). To ensure validity of the interview questions and appropriate responses and data, two subject-matter experts were asked to review the interview draft to examine question wording and to confirm that both individual questions and the comprehensive set of questions were representative of

the construct (Krathwohl & Smith, 2005). The experts have expertise in community college policy, distance education administration, research methods, and survey design. The experts included the Director of Distance Learning with the North Carolina Community College System, the Associate Vice President of Academic Services with the North Carolina Community College System. Members of the dissertation committee also reviewed the interview questions. The questions were revised into the final version based upon feedback from both the subject matter experts and the dissertation committee.

Procedures

In the survey portion of the study, the instrument was delivered via a link in an email from the researcher. 11,849 faculty and 158 distance learning administrators from 81 community colleges in North Carolina and Virginia were contacted. The researcher was able to obtain current active email addresses for faculty and administrators in North Carolina due to his position with the North Carolina Community College System. The researcher obtained permission to survey Virginia faculty from the Virginia Community College System office and collected email addresses from colleges' website directories.

The email introduced the researcher and the project. The email also provided a direct link to the online survey. Survey Monkey (http://www.surveymonkey.com/) was the tool used to distribute and collect survey responses electronically. This online software allowed respondents and non-respondents to be tracked. The software was also used to send follow-up reminders to non-respondents. The reminder was sent two weeks after the initial email.

Based upon the data collected from the surveys of distance education administrators, a list was compiled of colleges ranking the institutions according to the percentage of faculty participating in distance education (80% for high performing, Less than 20% for low performing) and overall number of distance education courses offered each semester (101 or more course offerings per semester for high performing, 50 or less for low performing). Purposeful sampling of this group was used to identify institutions for the interview portion of the study. Purposeful sampling involves the researcher selecting the most viable sample to answer the research questions. This sampling method involved understanding the variables that might influence an individual's contribution and was based on the researcher's practical knowledge of the research area, the available literature and evidence from the study itself (Freeman, Pisani, & Purves, 1988). The top two and bottom two ranked institutions with the greatest and lowest faculty participation in distance education were selected to participate in the interview portion of the study. This selection provided the greatest opportunity to identify differences between colleges that have the greatest number of faculty engaged (or potentially the greatest number of early adopters) in distance education from those colleges with the least number of faculty engaged (or potentially the fewest number of early adopters) in distance education.

Faculty interview participants were randomly selected from the top two performing and the two low performing ranked North Carolina institutions. Only North Carolina institutions were included in this portion of the study due to close proximity to the researcher's home location

Similarly, administrator interview participants were selected from the corresponding colleges of the faculty participants. Since many of the community colleges had a single individual responsible for distance education, the only criteria that was used to ensure the appropriate administrator participants were interviewed was job duties associated with distance education.

During the interview portion of the study, responses were recorded by the researcher. The researcher also identified and coded common elements within each interview. Participant names were omitted from the transcribing process to ensure ethical practice during the course of the study. Each participant was assigned a sequential number connected to the interview transcript. This maintained ethical and confidential treatment of the study's participants and provided a means to facilitate follow-up contact if needed.

Analysis

The data from the surveys was analyzed using descriptive statistics (mean, median, range) and ANOVA as shown in Table 1. The probability level for all tests of statistical significance for the study is $p < .05$ (Berge, 1998; Betts, 1998). Active (faculty participants) and non-active (faculty non-participants) subjects were distinguished using survey questions 8 and 10. For example, a faculty non-participant in distance education was someone who enters zero for question 8 and has never taught a distance education course or has not taught in three or more years.

Faculty survey questions 3 and 18 and the administrator survey questions 6 and 12 were used to determine a *Diffusion of Innovation score* for each respondent. Each

Table 1

Data Analysis

Research Question	Data	Analysis
1. What are the common attributes of faculty who engage in distance education? Who do not engage?	Faculty survey, demographics, questions 3-10 Diffusion of Innovation Score, questions 3,14, 17, 18	Descriptive statistics, means, ANOVA, Mann-Whitney
2. Faculty workload.	Faculty survey, demographics, question 9, 11	Descriptive statistics, means
3. Does training with technology impact the decision to teach a distance course?	Faculty survey, demographics, questions 15, 17	Descriptive statistics, means ANOVA
4. What reasons are given for not teaching distance courses?	Recorded interviews with faculty and administrators, questions 4, 7, 8	Coded elements, trends, researcher observations
5. What are the predominant barriers perceived by faculty participators, faculty non-participators, and distance education administrators?	Faculty survey, self-assessment; Recorded interviews with faculty, question 8	Descriptive Statistics ANOVA Coded elements, trends, researcher observations
6. Compare the ratings of barriers among each group.	Faculty survey, self-assessment, sections 1-3	ANOVA
7. How many community colleges among the sample population have viable distance education programs?	Administrator survey, Demographics, questions 5,8, 9	Descriptive statistics, means
8. How have community colleges with viable distance education programs helped their faculty to overcome barriers?	Recorded faculty and administrator interviews	Coded elements, trends, researcher observations

question contains five choices where the first choice (coded as a score of one) in each question indicates the greatest assimilation toward the use of technology and being an innovator (time to adoption of innovation). The last choice in each question (coded as a score of five) indicates the least assimilation toward the use of technology and being more of a 'laggard' in regards to adopting new technology.

The common elements from the interview responses were coded and grouped in order to identify themes or patterns. The data was further organized into coherent categories to summarize and highlight meaning from the text.

CHAPTER IV

RESULTS

Introduction

The first section of this chapter describes demographic data gathered from the survey instrument. Discussion in the second section is built around each of the eight research questions. The first seven research questions were drawn from the electronic survey. Question eight and portions of questions four and five where addressed by interviewing faculty and administrators approximately two months after the collecting the data from the electronic survey.

Respondents

Table 2 summarizes the basic descriptive statistics of the sample population of the 1,679 surveys that were returned (n = 1,597 faculty; n = 82 administrators), representing a 13% return rate. The low return rate may be a result of the survey being distributed at the end of the spring semester when many of the nine-month faculty were in the process of leaving for the summer. Of those completing the survey, 63.3% were female and 36.7% were male. The administrators who responded consisted of 68.3% female and 31.7% were male. This is representative of the reported makeup of the gender of faculty and administrators at North Carolina community colleges (Brown, 2007). On average, the faculty respondents had 10.6 years of experience and the administrators reported 14.9 years of experience in the community colleges. The average age of the female faculty respondents was 47.7 years old and 49.3 years for males. The age of female administrators averaged 49.2 years male administrators averaged 50.7 years of age.

Table 2

Descriptive Statistics for All Faculty Responses

Descriptive	n	Male	Female	Male Average Age	Female Average Age	Full Time	Part-time	Years of Experience
NC Faculty	1,338	491 (36.7%)	847 (63.3%)	49.2	46.9	1,115 (83.1%)	223 (16.7%)	10.3
VA Faculty	259	95 (36.7%)	164 (63.3%)	54.8	49.5	156 (60.2%)	103 (39.8%)	12.4
Total Faculty	1,597	586 (36.7%)	1,011 (63.3%)	49.3	47.7	1,271 (79.5%)	326 (24.2%)	10.6
NC Administrators	74	22 (29.7%)	52 (70.3%)	50.8	48.7	74	0	14.1
VA Administrators	8	4 (50.0%)	4 (50.0%)	50.3	55.5	8	0	22.0
Total Administrators	82	26 (31.7%)	56 (68.3%)	50.7	49.2	75	0	14.9

Research Question 1. What are the common attributes of community college faculty who engage (faculty participants) or do not engage (faculty non-participants) in distance education teaching?

Results from the survey showed that 71.1% (n = 1,135) of the faculty reported that they were active participants in distance learning. Criteria used to indicate active distance education participants included teaching or developing a distance education course presently or within the last three years. Additionally, 28.9% (n = 462) of the faculty reported that they have never been engaged in or were non-participants in distance education. Table 3 and Table G.2 in the appendix display the descriptive statistics of the participant and non-participant faculty groups.

Table 3

Descriptive Statistics for Faculty Distance Education Participators and Non-Participators

Descriptive	n	Male	Female	Male Average Age	Female Average Age	Full Time	Part-time	Years in Community College
NC Faculty participators in DE	962	342 (35.6%)	620 (64.4%)	48.7	46.9	843 (87.6%)	119 (12.4%)	10.7
VA Faculty participators in DE	173	64 (38.5%)	109 (61.5%)	53.9	50.3	110 (63.5%)	63 (36.4%)	13.3
Total Faculty participators in DE	1,135	406 (35.8%)	729 (64.2%)	49.5	47.4	943 (83.1%)	192 (16.9%)	11.1
NC faculty non-participators	376	149 (39.6%)	227 (60.4%)	50.8	48.7	282 (75.0%)	94 (25.0%)	9.1
VA Faculty non-participators	86	31 (36.0%)	55 (64.0%)	50.3	55.5	46 (53.5%)	40 (46.5%)	10.7
Total Faculty non-participators	462	180 (39.0%)	282 (61.0%)	50.7	49.2	328 (71.0%)	134 (29.0%)	9.4

Age and Years Experience

Mann-Whitney tests were conducted to determine if age differences and years in the community college systems were present between these two groups. The age comparison was non-significant, $p > 0.05$. However, when comparing the years of experience in the community college systems, there was a significant difference ($p = 0.000$) between the mean years of experience of faculty (participants verses non-participants).

Subject Areas and Traditional Courses

The largest groups of faculty who are actively involved in distance education taught computer science courses (11.1%) and health care-related courses (10.2%) as shown in Table 4. A large percent of the faculty non-participants taught health care-related courses (17.7%) and math (11.9%).

Table 4

Course Areas for Faculty Participators and Non-Participators

Program Area/Subject	Number of Participators (% of Total Participators)	Number of Non-participators (% of Total Non-participators)
Computer Science	126 (11.1%)	15(3.2%)
Health Care (Nursing, Surgery Tech, Pharmacy)	116 (10.2%)	82 (17.7%)
English and Literature	112 (9.9%)	34 (7.4%)
Criminal Justice	18 (1.6%)	4 (0.9%)
Emergency Medical Service	15 (1.3%)	2 (0.4%)
Anatomy	13 (1.1%)	6 (1.3%)
Chemistry	13 (1.1%)	8 (1.7%)
Developmental Education	12 (1.1%)	17 (3.8%)
Communications	12 (1.1%)	4 (0.9%)
All Others (Engineering, Electronics, Administration, Fire Service, etc.)	300 (26.4%)	191 (41.3%)

Diffusion of Innovations Scores: Faculty

Questions 3 and 18 from the survey were used to arrive at a value to determine the diffusion of innovations characteristic for each faculty survey response. The values ranged from a minimum score of two to a maximum score of ten. The lower the score, the more the individual tends toward the innovator characteristic and the higher the score, the more the individual tends toward the laggard characteristic. These values are plotted in Figure 2 for faculty participators in distance education, and Figure 3 for faculty non-participators in distance education. Also, plotted against the values is the normal distribution curve.

Figure 2

Diffusion of Innovation Diagram for Faculty Participators

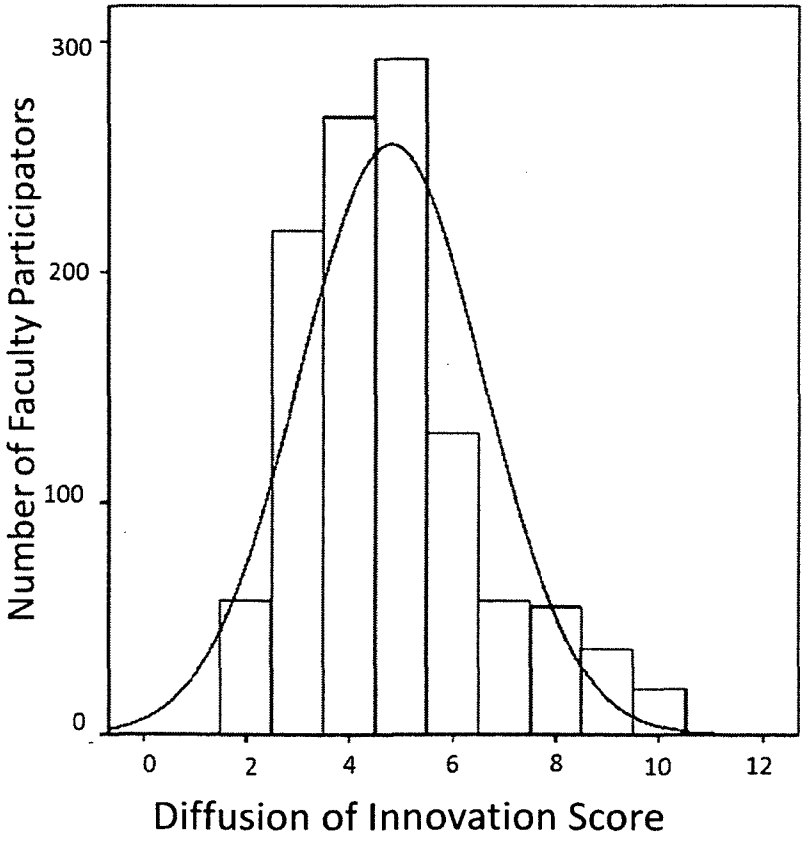
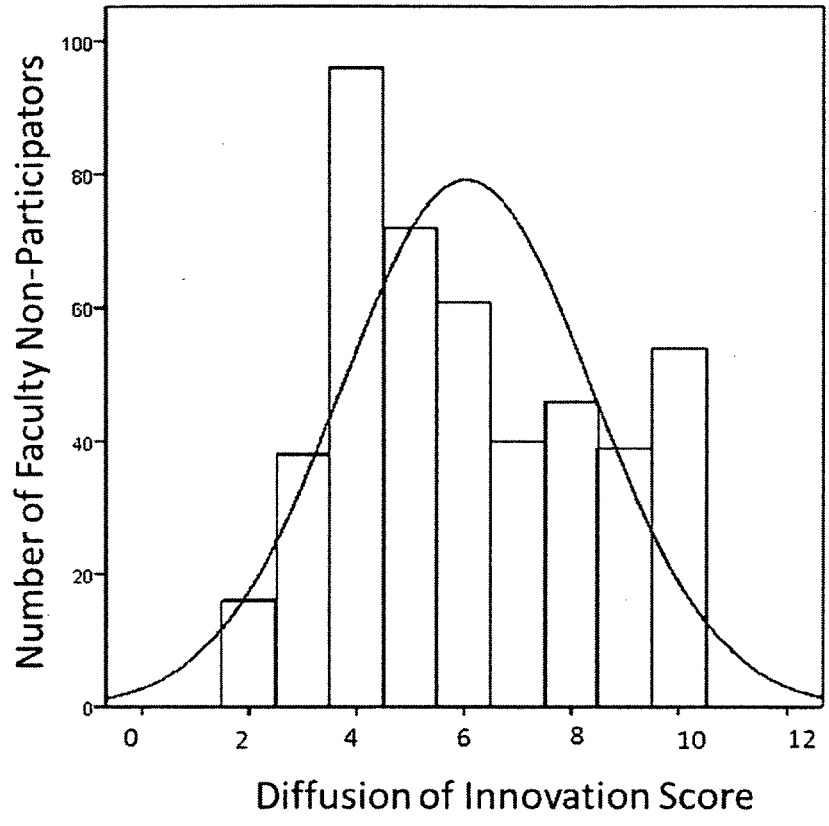


Figure 3

Diffusion of Innovation Diagram for Faculty Non-Participators

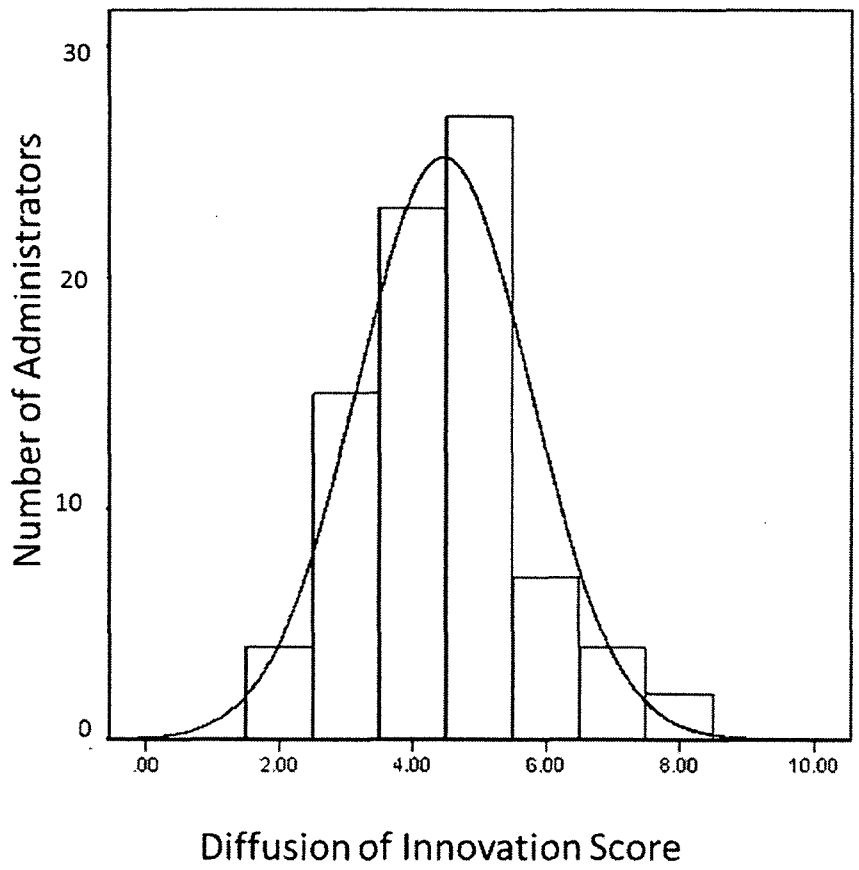


Diffusion of Innovations Scores: Administrators

Questions 6 and 12 from the administrator survey were used to arrive at a value to determine the diffusion of innovations characteristic for each administrator using the same process as was used for the faculty. These values are plotted in Figure 4 for the entire administrator sample. Also, plotted against the values is the normal distribution curve.

Figure 4

Diffusion of Innovation Diagram for Administrators



Research Question 2. What is the work load for those teaching distance education courses including number of courses taught and hours per week?

The survey revealed that 79.5% of the respondents (n = 1,271) were full time instructors (30 hours or more per week with fringe benefits) and 24.2% (n = 326) were adjuncts (worked less than 30 hours with no fringe benefits). Specifically, 83.1% of the faculty participators were full-time and 16.9% were part-time. In comparison, the non-participators were 71.0% full-time and 29.0% part-time. A significant difference exists

between the number of full-time faculty participators ($F(1,1595) = 30.05, p < .001$) and full-time faculty non-participators.

A large portion of the faculty participators in distance education, 53% (n = 607), reported that they also spent on average 4.98 hours per week developing courses while also teaching distance education courses. The definition of non-participant in distance education is a faculty member who is not currently teaching or has not taught and developed a distance education course within the last three years from the date of the survey. However, 38 non-participators responded that they had taught a traditional course more than three years ago while teaching or developing a distance education course.

Research Question 3. Does training or proficiency with technology impact the decision to teach distance courses?

Distance Education Professional Development

In response to the survey question on distance education training, 29.7% of the faculty participants attended a training or pedagogy course in the past month, 31.1% in the past six months, 19.1% in the past year. 4.5% reported that they have never attended a training course on distance education or pedagogy. A smaller percentage of faculty non-participants attended training or a pedagogy course with 13.4% reporting having attended a course in the past month, 20.0% in the past six months, 15.8% in the past year. 36.1% reported that they have never attended a training course on distance education or pedagogy. A significant difference was detected ($F(1, 1595) = 164.78, p < .001$) when training course attendance of faculty participators were compared to faculty non-participators.

Proficiency with Technology

Twenty-three percent of the faculty distance education participants listed themselves as computer experts and 60.7% as having above average computer skills. In comparison, 14.5% of the faculty non-participants in distance education listed themselves as computer experts and 57.1% as having above average computer skills. There was a significant difference ($F(1,1595) = 44.17, p < .001$) in how faculty participators rate their computer skills as compared to faculty non-participators.

Research Question 4. What reasons are given for not teaching distance courses?

Question 2 of the survey was intended for faculty non-participators in distance education to learn about some of their reasons for not participating in distance education. Of the 462 non-participators, 214 manually entered a specific reason for not participating. These responses are summarized into themes and shown in Table 5. The most frequent theme for not participating in distance education was that the opportunity did not exist or had not been offered to them by their department leader (n = 71, 33.1%).

Research Question 5. What are the predominant barriers perceived by faculty participators, non-participators and distance education administrators at community colleges to the implementation of distance education?

Considering that nonparametric procedures, based on the rank, median or range, are appropriate for analyzing these data (ordinal data, value of one equals strongly disagree, value of two equals disagree, value of three equals neither agree nor disagree, value of four equals agree, and value of five equals strongly agree), as are distribution

Table 5

Reasons for Not Participating in Distance Education (Non-participators only)

Excuse Theme (for not participating in distance education)	Responses (%); n = 214
No Opportunity	71 (33.1%)
Philosophy/Belief	44 (20.6%)
Faculty Workload	37 (17.3%)
Lack of Technological Background	29 (13.6%)
Institutional or Departmental Policy	15 (7.0%)
Concern about Quality of Course	9 (4.2%)
Department Funding/Compensation	2 (0.93%)
Poor Quality of the Student/Cheating	2 (0.93%)

free methods such as tabulations, frequencies, contingency tables and chi-squared statistics (Allen & Seaman, 2007), the data were separated into frequency tables (Tables G.2, G.3 and G.4 in the appendix) for faculty participators, faculty non-participators, and administrators.

Part two of the survey allowed faculty and administrators to rank listed barriers. From this data, the predominant barriers (based upon the Likert scale ratings, *Mdn = 4.0)* perceived by faculty participators included concern about faculty workload, lack of salary increase, concern about quality of students, and the need for direct in-class contact with students. The predominant barriers as perceived by faculty non-participators included

concern about faculty workload, concern about quality of courses (based upon the Likert scale ratings, *Mdn = 4.0*), additional responsibilities, and the need for direct in-class contact with students. Administrators reported the predominant barriers (based upon the Likert scale ratings,*Mdn = 4.0)* included concern about faculty workload, lack of technological background, concern about quality of students, concern about quality of courses, additional responsibilities, and the need for direct in-class contact with students.

The survey also provided the opportunity for the entire group to manually enter additional barriers. The survey collected 720 responses to this question with a majority coming from the faculty participators (526 or 46.3%). Faculty non-participators provided 194 entries (42.0% of the faculty non-participators). These responses were organized into twelve barrier themes as shown in Table 6 for faculty and Table 7 for administrators.

Research Question 6. How do the ratings of barriers among community college faculty (participators and non-participators), and administrators and faculty (participators and administrators, non-participators and administrators) compare?

Analysis using ANOVA shows (see Appendix G for Tables G.6, G.7, and G.8 for the ANOVA results) that significant differences ($p < 0.05$) existed between faculty participators and faculty non-participators on the ratings of the barriers shown in Table 8. Significant differences also exist between faculty participators and administrators ($p < 0.05$) on the rating of the barriers shown in Table 9.

Table 6

Self-Reported Additional Barrier Themes (All Faculty)

Barrier Theme	Responses (%); n = 720
Philosophy/Belief	142 (19.7%)
Faculty Workload	126 (17.5%)
Technical Issues	102 (14.2%)
No Opportunity	64 (8.9%)
Lack of Technological Background	60 (8.3%)
Poor Quality of the Student	59 (8.2%)
Institutional or Departmental Policy	44 (6.1%)
Need for Direct Student Contact (Student Cheating)	40 (5.6%)
Poor Quality of the Course	33 (4.6%)
No Compensation	17 (2.4%)
No Department Funding	7 (1.0 %)
Additional Responsibilities	0 (0%)

Table 7

Self-Reported Additional Barrier Themes (Administrators)

Barrier Theme	Responses (%); n = 54
Technical Issues	13 (24.1%)
Philosophy/Belief	10 (18.5%)
Lack of Technological Background	7 (13.0%)
No Department Funding	7 (13.0%)
Faculty Workload	6 (11.1%)
Institutional or Departmental Policy	5 (9.3%)
Poor Quality of the Student	4 (7.4%)
Need for Direct Student Contact) Student Cheating	1 (1.9%)
Poor Quality of the Course	1 (1.9%)
No Opportunity	0 (0%)
No Compensation	0 (0%)
Additional Responsibilities	0 (0%)

Table 8

Faculty Participator and Non-participator Comparison, Significantly Different Barriers Only

Barrier (F ratio)	Participators	Non-Participators
Lack of Distance Education Professional Development (F(1,1514) = 0.65)	*M =2.8* *SD = 1.2*	*M=3.0** *SD = 1.1*
Negative Distance Education Experiences (F(1,1514) = 9.15)	*M =2.5* *SD = 1.1*	*M=2.7** *SD = 1.0*
Lack of Merit Pay (F(1,1514) = 4.67)	*M =3.3** *SD = 1.1*	*M =3.1** *SD = 1.0*
Lack of Technological Background (F(1,1514) = 42.3)	*M =2.4* *SD = 1.0*	*M =2.8*** *SD = 1.2*
Concern about Quality of Courses (F(1,1514) = 32.1)	*M =3.1* *SD = 1.3*	*M =3.5*** *SD = 1.2*
Family Concerns – Time Away from Family (F(1,1514) = 10.4	*M =2.5* *SD = 1.1*	*M =2.8** *SD = 1.1*
Additional Responsibilities (F(1,1514) = 9.06)	*M =3.1* *SD = 1.2*	*M =3.3** *SD = 1.2*
Need for Direct In-class Contact with Students (F(1,1514) = 96.1)	*M =3.3* *SD = 1.3*	*M =4.0*** *SD = 1.1*

*$p < .05$

**$p \leq .001$

Table 9

Faculty Participator and Administrator Comparison, Significantly Different Barriers Only

Barrier (F ration)	Participators	Administrators
Lack of Support from Administration (F(1, 1168) = 9.35)	*M =2.7** *SD = 1.2*	*M=2.3* *SD = 1.0*
Negative Distance Education Experiences (F(1, 1168) = 6.81)	*M =2.5* *SD = 1.1*	*M=2.9** *SD = .91*
Lack of Royalties Paid to Faculty on Development Materials (F(1, 1168) = 5.78)	*M =3.1** *SD = 1.1*	*M=2.9* *SD = 1.1*
Lack of Financial Support from Institution (F(1, 1168) = 5.55)	*M =3.3** *SD = 1.2*	*M=3.0* *SD = 1.3*
Lack of Technological Background (F(1, 1168) = 106.1)	*M =2.4* *SD = 1.1*	*M=3.8*** *SD = .98*
Additional Responsibilities (F(1, 1168) = 15.5)	*M =3.1* *SD = 1.2*	*M=3.6** *SD = 1.0*
Need for Direct In-Class Contact with Students (F(1, 1168) = 8.64)	*M =3.3* *SD = 1.3*	*M=3.6** *SD = .80*

*$p < .05$

**$p \leq .001$

Significant differences between faculty non-participators and administrators ($p < 0.05$) were apparent on the barriers shown in Table 10.

Research Question 7. How many community colleges among the sample population have viable distance education programs?

Based upon the administrator surveys from 46 of the 81 community colleges in North Carolina and Virginia (survey questions 5, 8, and 9), all reporting colleges

Table 10

Non-participator and Administrator Comparison, Significantly Different Barriers Only

Barrier (F ration)	Non-Participators	Administrators
Lack of Support from Administration (F(1, 499) = 28.8)	*M =2.8*** *SD = 1.0*	*M=2.3* *SD = 1.0*
Negative Distance Education Experiences (F(1, 499) = 1.32)	*M =2.7* *SD = 1.1*	*M=2.9*** *SD = .91*
Lack of Royalties Paid to Faculty on Development Materials (F(1, 499) = 4.63)	*M =3.1** *SD = 1.1*	*M=2.9* *SD = 1.1*
Lack of Financial Support from Institution (F(1, 499) = 6.02)	*M =3.3** *SD = 1.1*	*M=3.0* *SD = 1.3*
Lack of Recognition and Rewards (F(1, 499) = 7.41)	*M =2.8* *SD = 1.1*	*M=3.0** *SD = .93*
Additional responsibilities (F(1, 499) = 4.16	*M =3.3* *SD = 1.2*	*M=3.6** *SD = 1.0*
Need for Direct In-Class Contact with Students (F(1, 499) = 14.3)	*M =4.0*** *SD = 1.1*	*M=3.6* *SD = .80*

*$p < .05$

**$p \leq .001$

indicated having ten or more years' experience with distance education with a range from zero to 35 years. Fourteen colleges reported that 80% or more of their faculty participate in distance education, and seventeen colleges reported offering between 51 and 100 distance educations courses per semester. Three colleges reported offering 501 or more courses each semester.

Research Question 8. How have community colleges with viable distance education programs helped their faculty to overcome barriers to participating in distance education?

The colleges selected for the interview portion of the study were determined based upon their administrators' responses to the demographic questions (5, 8, and 9) on the survey. The top two colleges based upon the administrator responses included a large urban college with 501 or more distance education courses per semester and 80% or greater faculty participation in distance education and a small rural college with 50 to 101 distance education courses per semester and 80% or greater faculty participation. The two lowest rated colleges based upon their administrators' responses also included a large urban college but with 20% or less faculty participation in distance education and 101 to 500 distance education courses per semester and a small rural college with less than 20% faculty participation in distance education and 10 to 20 distance education courses per semester.

The faculty and administrator interviews were coded to help identify trends in the responses. The code key is shown in Table 11. The faculty and administrator coded responses are shown in Table 12. Analysis of the interview transcripts resulted in ten trends. Complete interview responses are displayed in Appendix H.

Table 11

Interview Data Coding Key

Code	Description
AE	Faculty age and experience are not barriers
CS	College provides distance education strong support
DI	Faculty satisfied with college's distance education infrastructure
FT	Faculty training is adequate
IP	Intellectual property is not compensated but some form of payment offered for development
LC	Lack of compensation does not impact distance education
LP	Lack of knowledge of college distance education policy
LR	Lack of recognition does not affect distance education participation
PA	College's distance education policy is adequate
RP	College support reinforces faculty participation

Table 12

Summary of Common Codes

Interview Question	Response Codes						
	Faculty 1	Faculty 2	Faculty 3	Faculty 4	Admin. 1	Admin. 2	Admin. 3
College's policy on DE development	PA	LP	LP DI	CS FT	PA	LP	PA
Opinion on college's policy	PA	PA	LP	PA LC	PA		PA
Compensation	IP	LC	LP	FT LC	IP	IP	
intellectual property as related to DE	IP			IP	IP		IP
lack of compensation	LC	LC		LC IP	LC	LC	LC
Availability of course development time		LC			LC	LC	CS
Organizational Changes due to DE	FT RP		CS	CS RP	RP		RP
Changes promote or hinder efforts to participate	RP		RP	RP FT	RP		RP

Table 12. Continued

Interview Question	Response Codes						
	Faculty 1	Faculty 2	Faculty 3	Faculty 4	Admin. 1	Admin. 2	Admin. 3
Recognition for efforts in DE	LR FT	LR		LR		LR	
Preparing faculty skills for DE	FT DI	FT DI	FT	RP FT	FT DI	FT	FT
Infrastructure impacts efforts in DE	DI	DI RP	DI	DI	DI		DI
Top three personal barriers	AE	AE	AE	AE	AE		
Age or experience impacts participation	AE	AE	AE	AE FT RP	AE		

CHAPTER V

DISCUSSION

Introduction

The purpose of this study was to expand upon the understanding of the barriers that inhibit community college faculty participation in distance education and to learn how colleges with successful distance education programs have helped their faculty overcome obstacles to participation. The diffusion of innovation theory (Rogers, 1995) was used to identify and interpret the characteristics of faculty who participate in distance education verses those faculty who do not participate. This chapter presents the conclusions about the data and proposes recommendations for policy or operational changes at community colleges to facilitate improved participation levels of faculty in distance education. Finally, suggestions for additional research are presented.

Interpretation of Results

Research Question One: What are the common attributes of community college faculty who engage or do not engage in distance education teaching?

In this study, gender and age were shown not to vary among the faculty participators and non-participators. This result both contrasts and agrees with the results that some researchers have observed relative to age. An earlier study found that faculty under the age of 50 are more likely to be distance education participators (National Education Association, 2000) while others have found that age is not a factor (Bradburn, 2002; Lee, 2001; Schifter, 2002). Another study found that in each additional year in a

faculty members age increases their chances of participating in distance education by 1% (Tabata & Johnsrud, 2008). However, more 'years of experience in community colleges' was shown in this study to be a common attribute of faculty participators. This finding is unexpected under the assumption that older faculty will have accumulated more years of community college experience. The lack of a relationship between faculty age and years of experience may be explained by a study that found that many community college faculty do not begin their careers in community colleges, but instead begin teaching at the colleges as a career change or second career following retirement (Fugate & Amey, 2000). Another explanation why the current study found that participators have more community college experience derives from the respondents direct input on the survey regarding additional barriers. A common response was 'no opportunity' which was followed by an explanation of "only full time staff considered for distance learning courses" or "being part-time and low on the seniority scale, I have never been offered a chance to teach online." Finally, it may be that in the past 10 years, distance education courses have become more pervasive and faculty have fewer options for not teaching.

This study also investigated how the adopter categories posed by Rogers' (1995) diffusion of innovations theory might apply to the faculty participators and non-participators in distance education as well as the administrators who lead the colleges' distance education programs. Several questions in the study were designed to pertain directly to the attributes of the five adopter categories: innovators, early adopters, early majority, late majority, and laggards. Values were assigned to each possible answer and a score was calculated for each respondent. The plots for the scores for faculty

participators, Figure 2, when compared to Rogers' plot of adopter categories, Figure 1, graphically illustrates that those who participate in distance education trend toward the innovators and early adopters (skewed toward the left side of the plot). The plot for faculty non-participators, Figure 3, is not skewed toward one side or the other indicating that non-participators may be more representative of early and late majority types. However, the appearance of a large number of non-participators that displayed a diffusion of innovation score more representative of innovators or early adopters may be an artifact resulting from the high number of non-participators from 'applied' technology disciplines as shown in Table 4. Applied programs like those in health care or engineering technology may not have faculty who are engaged in distance education, however, faculty in the applied programs may be involved in the adoption of new technology relative to their particular discipline. The survey questions used to derive the diffusion of innovation scores did not distinguish between the type of technology (e.g. distance education as a technology or specialized training equipment and technology) individuals are engaged. The distance education administrators' plot appears very similar to the plot of scores for the faculty participators, indicating that administrators perceive themselves more as innovators and early adopters.

Research Question Two: What is the work load for those teaching distance education courses including number of courses taught and hours per week?

Faculty participators reported that they taught approximately two distance courses per semester and spent 4.98 hours developing their distance courses. No determination was made as to whether faculty were given release time for developing a distance

education course of if it was considered a part of normal faculty load. In the literature, time is commonly expressed as a barrier to participation in distance education, and it could be assumed that large workloads placed on faculty may affect their ability to participate in distance education (Berge, 1998). The literature suggests there is a significant barrier to participation due to the work load of full-time faculty. However, the results of this study show the opposite to be the case that amongst full-time faculty there are proportionately more faculty participators than non-participators ($p < .001$). This participation level may be a result of the institutions' understanding of the time constraint associated with distance education. A trend that was observed during the interviews with faculty and administrators revealed that the colleges did provide for release time or include development time as part of their distance education policies.

Research Question Three: Does training or proficiency with technology impact the decision to teach distance courses?

Faculty participators reported attending distance education training courses more often than faculty non-participators ($p < .001$). This result may be related to the enthusiasm demonstrated by faculty participators toward distance education. For example, two faculty members interviewed during the qualitative portion of the study responded "most faculty want to stay abreast of any and all new distance education technology and how to use the technology effectively" and "I personally look forward to hearing about best practices or new distance education techniques." This finding is further backed by two recent studies that found continuous distance education and training is both a motivator and a basic requirement for retaining and supporting distance

education faculty (Wickersham & McElhany, 2010; Green, Aljendro, & Brown, 2009). However, these results do conflict with another study that demonstrated that the availability of distance education training and development neither increased nor decreased the likelihood of participation in distance education (Tabata & Johnsrud, 2008).

The present study also revealed a significant difference in how faculty participators and non-participators rated their own computer skills. Faculty participators rated their computer skills significantly higher ($p < .001$) than faculty non-participators. This result suggests that participators have greater confidence in their technology abilities which is an attribute of an *innovator* (Rogers, 1995). This finding is consistent with other studies that have shown that technology competencies may act as a springboard or obstacle to participation in distance education (Berge et al., 2002; Rockwell et al., 1999; Schifter, 2002; Tabata & Johnsrud, 2008).

Research Question Four: What reasons were given for not teaching distance courses?

Table 4 provides a summary of reasons why faculty non-participators do not engage in distance education. Time and lack of training have been previously discussed and are common barriers mentioned in the literature. However, the first two reasons provided in Table 4, 'no opportunity' and 'philosophy or belief', have not been specifically identified by other studies. The 'no opportunity' reason may in fact be a potential policy action for institutions wanting to involve more faculty by merely providing more opportunities for all faculty to engage in distance education. The 'philosophy or belief' reason given by many of the non-participators appears to be a

result of a lack of information or knowledge about the effectiveness of distance education or a lack of instructional design knowledge relative to constructs of a quality distance education course. For example, some non-participators responded that "online format is difficult for communication classes" or "mathematics is not an online type of course" or "I don't think the quality of education is as good as in-seat classes." Reasons such as these have been discussed and reputed in the literature (Berge, 1998; Bruner, 2007; Gaytan, 2007; Russell, 1999; Valentine, 2002). In fact, an entire website has been dedicated to no significant difference in the effectiveness between distance courses and traditional courses (www.nosignificantdifference.org).

Research Question Five: What are the predominant barriers perceived by faculty participators, non-participators and distance education administrators at community colleges to the implementation of distance education?

There was agreement between the faculty participators and non-participators on several barriers. Both groups agreed that 'faculty workload' and 'the need for direct in-class contact with students' are predominant barriers. Participators also rated high the 'lack of salary increase' and 'concern about the quality of students'. Faculty non-participators indicated that 'concern about the quality of courses' and 'additional responsibilities' were significant obstacles. These findings are consistent with those of prior studies (Chen, 2009; Oomen-Early & Murphy, 2009). Both faculty groups also rated the specific time barriers as high which is also in agreement with the literature (Berge et al., 2002; Rockwell et al., 1999; Schifter, 2002; Tabata & Johnsrud, 2008).

Administrators rated concern about 'faculty workload', 'lack of technological background', 'concern about the quality of students', 'concern about the quality of courses', 'additional responsibilities', and 'the need for direct in-class contact with students' as the greatest barriers to faculty participation. There is some agreement between the administrators' perceptions of the barriers and what faculty participators ('faculty workload', 'concern about the quality of students', and 'the need for direct in-class contact with students') and non-participators ('faculty workload', 'concern about the quality of courses', 'additional responsibilities', and 'the need for direct in-class contact with students') rate as significant barriers. The administrators differ in their perception of the technological background of their faculty as neither participators nor non-participators rated 'lack of technological background' high as an important barrier to participation. This particular result may warrant further investigation to define the technology skills and competencies required of faculty to be successful at distance education. Comparing a 'baseline' of skills and competencies to those of faculty participators may help determine whose point of view, faculty participators and non-participators or administrators, is more accurate regarding the "lack of technological background". Furthermore, such information may help administrators make decisions regarding distance education professional development for their faculty.

The survey also collected responses from the faculty regarding additional barriers. This question was intended to identify any obstacles that were not addressed in the survey and may have been overlooked by this researcher. Table 6 grouped the responses into themes and similar to the reasons from non-participators for not engaging in distance

education listed in Table 5, 'philosophy and belief', 'time', and 'no opportunity' appears most often. 'Philosophy and belief' and 'no opportunity' are two obstacles that were not considered when constructing the survey instrument and are not present in the literature. 'Philosophy and belief' barrier may fit best within the group of extrinsic barriers and may derive from a past negative experience with distance education or a lack of knowledge of the positive attributes provided by the distance format. The 'no opportunity' barrier fits within the group of intrinsic barriers and seems to depend upon departmental or institutional policy regarding the assignment of distance education duties.

The administrators were also asked to supply input on additional barriers. This data is displayed in Table 7. The obstacle of 'philosophy and belief' appeared in the administrators' responses (18.5%) the second most after 'technical issues'. 'Philosophy and belief' was the only barrier mentioned by the administrators that had not been addressed in the survey. This particular barrier appears derive from a lack of knowledge of the research surrounding the effectiveness of distance education. Many of the comments within the 'philosophy and belief' barrier theme were similar to these responses "distance courses not as effective in disseminating learning objectives" or "you can't design a distance learning course for our technical programs". Again, statements such as these have been discussed and reputed in the literature (Berge, 1998; Bruner, 2007; Gaytan, 2007; Russell, 1999; Valentine, 2002).

The barrier of 'no opportunity' did not appear in any of the administrators' input. This finding is in contrast to the responses from faculty that may be the result of a limitation of the current study in regards to the make-up of the administrator group. The

qualitative portion revealed that some colleges pass the responsibility of approving and scheduling distance education courses to their division deans or department chairpersons. However, the administrative group in the study included chief academic officers and directors of distance learning, not division deans and department chairpersons. Therefore, the administrative sample group may not have an understanding of how faculty are assigned distance education duties. The preference of those making decisions on distance education course offerings may be to assign the courses to only experienced or full-time faculty, reducing the opportunity for new or adjunct faculty.

Research Question Six. How do the ratings of barriers among community college faculty (participators and non-participators), and administrators and faculty (participators and administrators, non-participators and administrators) compare?

Faculty Participator and Non-participator Comparison

Significant differences were found between the two groups of faculty in the comparison on eight of the 19 barriers outlined in the survey. Faculty non-participators indicated a higher rating than faculty participators on seven of the eight barriers. The barrier of 'lack of merit pay' was rated higher by participators which stand to reason that those individuals engaged and instructing distance courses would be concerned that their efforts be rewarded as opposed to those instructors not teaching or developing distance courses.

The differences between the faculty participators and non-participators may be explained when considering the attributes of the two groups as defined by the Diffusion of Innovations theory. Relative to innovation adoption, participators, as depicted in

Figure 3, tend toward the innovator and early adopter types. These two groups are characterized by being venturesome; having the ability to understand and apply complex technical knowledge; ability to cope with a high degree of uncertainty about an innovation; respected by peers and are successful (Rogers, 1995). Faculty non-participators, as depicted by Figure 4, trend toward the early and late majority types relative to the adoption of innovations. The early majority is characterized by a tendency of being very deliberate before adopting an innovation and late majority tend to be influenced by peers, and are skeptical and cautious (Rogers, 1995). This result may be somewhat skewed by the number of non-participators from *applied technology* and health care programs as displayed in Table 4. Such programs focus on hands-on training using advanced technology such as computer integrated machining or magnetic resonance imaging for example. Instructors in these programs may have rated their diffusion to innovation much higher than non-participators from a more lecture based program like English or psychology.

Faculty Participator and Administrator Comparison

Faculty participators and administrators differed significantly on seven of the 19 barriers listed on the survey. Not surprisingly, faculty participators felt more strongly about the 'lack of support from administration', 'lack of financial support from institution', and 'lack of royalties for developing distance courses'. Administrators felt more strongly about 'negative distance education experiences', 'additional responsibilities', 'need for direct in class contact with students', and 'lack of

technological background' as important barriers when compared to the responses of faculty participators.

Of interest is the barrier of 'lack of technological background'. The gap between the two groups relative to this barrier was significant indicating a serious difference in opinion about the technology skills possessed by faculty. Similarly, this difference in opinion is compounded by the finding that administrators did not agree that the barrier of 'lack of distance education professional development' was important. This finding suggests that administrators identified an issue, but failed to recognize a potential solution.

Faculty Non-participators and Administrator Comparison

Similar to the comparison between participators and administrators, non-participators differed from administrators on seven of the 19 barriers. Unlike the previous comparison, non-participators and administrators did not disagree significantly on the barrier of 'lack of technological background'. Non-participators did agree more strongly that the 'lack of support from administration', 'lack of financial support from institution', and 'lack of royalties for developing distance courses' were important barriers as compared to administrators.

The comparisons between the faculty and administrators demonstrated the problems that many institutions face; a communication breakdown between the administration and faculty relative to fiscal realities and instructional needs (Cohen & Brawer, 2003).

Research Question Seven: How many community colleges among the sample population have viable distance education programs?

The criteria established to identify institutions with high performing verses low performing distance education programs was the percentage of faculty reported to be participating in distance education (80% for high performing, less than 20% for low performing) and overall number of distance education courses offered each semester by the institution (101 or more course offerings per semester for high performing, 50 or less for low performing). Surveys were returned from 48 of the 81 total colleges in the two community college systems. Of the 48, 11 colleges reported 80% or more of their faculty participates in distance education; and nine of the 11 colleges reported offering 101 or more courses each semester. These nine colleges met both of the measures for a viable distance education programs. Interestingly, five of the nine colleges reporting 80% faculty involvement and 101 or more courses each semester were rural community colleges. Only one of the nine was a large urban community college. Larger community colleges typically have access to more resources and thus may have dedicated distance education instructional design staff or are able to purchase expensive off-the-shelf distance courses (Cohen & Brawer, 2003). Therefore, unlike the larger urban community colleges, small rural colleges with fewer resources are more dependent upon their faculty to develop and instruct new distance learning courses.

Of note are the numbers of colleges that report low numbers of engaged faculty (20% or less) and low numbers of distance courses offered each semester (50 or fewer courses each semester). Out of the 48 colleges responding to the survey, six reported

engaging 20% or less of their faculty and only three of the six also reported offering 50 or fewer distance education courses per semester. All three colleges meeting both measures for low performing distance education programs are rural community colleges.

One of the six colleges reporting low numbers of engaged faculty also reported 101 or more distance courses per year and was a large urban community college. This finding in particular demonstrates a limitation of the definition of viable distance education programs used in this study. According to the criteria, if a college reports low numbers of engaged faculty, but high numbers of distance course offerings it is not considered viable. Perhaps, the definition of viable program used in this study was too simple and that other variables need to be considered. Also, as stated earlier, larger community colleges do have access to more resources and thus could be out-sourcing a portion of their distance education, thus lower the number of engaged faculty while maintaining a large number of offerings. Another possibility is that a college in this situation has a more viable program because it has learned how to efficiently and effectively deliver more distance education courses with fewer engaged instructional staff.

Research Question Eight: How have community colleges with viable distance education programs helped their faculty to overcome barriers to participating in distance education?

Interviews were conducted with four colleges that were identified from the administrators' surveys, two as having viable (a large urban and a small rural community college) or high performing distance education programs and two as having low

performing distance education programs (a large urban and a small rural community college).

A variety of trends emerged from the qualitative portion of this study as shown in Table 12. One of the first observations was the presence of a gap in the knowledge or understanding of the institutions' distance education policies between faculty (displayed little or no knowledge of the actual policies) and the administrators (displayed complete knowledge of the policies). This result also highlights communication or misinformation issues on community college campuses.

Some of the trends uncovered during the qualitative portion of the study disagree with the findings of the quantitative portion. For example, it was clear during the interviews that faculty from both high performing and low performing programs felt that training and support for distance education was either adequate or strong. However, both 'lack of training' and 'technical issues' were predominant barriers from the responses of faculty participators and non-participators. Additionally, three of the four faculty interviewed believed that compensation was adequate which is in disagreement with the data from faculty participators that reported the lack of salary increase as one of the more important obstacles. Finally, each of the faculty agreed that age and experience are not barriers to participation. This opinion is not supported by the data found in quantitative portion of this study that showed that faculty with less experience tend to be non-participators in distance education.

Summary of Key Findings

Attributes of Participators and Non-participators

Common attributes of faculty participators tend to be individuals with full-time status, possessing significant amount of community college experience, and characteristics that align themselves closely with innovators and early adopters of innovations. They perceive that the greatest barriers to their participation in distance education are 'lack of faculty compensation', 'faculty workload', 'the quality of students', and 'the strong need for direct in-class contact with students'.

In contrast, the attributes of faculty non-participators include less college teaching experience and possess characteristics of early and late majority types relative to adoption of innovations or technology. Non-participators believe strongly that 'faculty workload', 'additional responsibilities', 'the quality of distance courses', and 'the strong need for direct in-class contact with students' as the major barriers to their participation in distance education.

'No Opportunity' and 'Philosophy and Belief' Barriers

Two categories of barriers to participation in distance education emerged that were not observed in the literature, 'philosophy and belief' and 'no opportunity'. 'No opportunity' can be further grouped into the list of extrinsic barriers due to its apparent dependence upon institutional or departmental policy limiting faculty participation to full-time or faculty with seniority. 'Philosophy and belief' fits best within the group of intrinsic barriers based upon how factors from outside the institution and more closely

associated with ones' belief or opinion about distance education (e.g. media reports, peers, past negative experiences).

Administrator and Faculty Participator Difference of Opinion

One major difference in opinion relative to distance education and a barrier to participation was uncovered between faculty and administrators. This difference appeared between the administrators' belief that most faculty lacked a strong technological background, whereas, this study found that that faculty participators gave a high rating to their technological skills. Faculty participators were confident in their technology skills and abilities. This is also consistent with the attributes of faculty participators as innovators and early adopters as described by the Rogers (1995).

Agreement of Predominant Barriers

Agreement was found between administrators and faculty relative to 'faculty workload' and 'the need for direct in-class contact with students' as important barriers to participation. However, the extent that non-participators perceive 'the need for direct in-class contact with students' as a barrier is significantly greater than both participators and administrators.

Recommendations for Distance Education Policy

The findings suggest that policy recommendations can be made to encourage wider participation of faculty in distance education and eliminate or greatly reduce the impacts of various barriers. The following four policy changes are recommended to improve the rate of faculty participation in the delivery of distance education courses.

Distance Education Professional Development

Faculty with interest in distance education should be encouraged to complete a set number of hours of training per year on distance education technology and pedagogy. This may help faculty overcome barriers like 'technological background' and 'lack of distance education professional development'. Most colleges conduct college-wide mandatory professional development or require their faculty to obtain varying amounts of professional development credits as a condition for continued employment. In such cases, colleges could focus their professional development events or requirements on distance education topics and training.

More Opportunity for All Faculty and Spread the Workload

Opening up the opportunity for all faculty to participate in distance education by relaxing requirements that only full-time or senior faculty be allowed to participate, may result in an increase in the number of engaged faculty. This addresses the 'no opportunity' barrier identified in this study. With increased interest and involvement in distance education, perhaps some of the additional workload placed upon full-time faculty could be lessened by spreading the distance education responsibilities among more faculty members.

Another recommendation is for community colleges to evaluate their full-time faculty workload limits and perhaps consider lowering the maximum allowable number of courses for full-time and adjunct faculty involved in distance education. Participators noted that faculty compensation and workload were two important barriers to their participation in distance education. Reducing the required full-time and adjunct workload

would allow faculty participators more opportunity to teach distance learning courses for additional pay.

Assessment Tool or Required Distance Education Success Course

Colleges should consider employing a tool, such as the SmarterMeasure assessment, that evaluates a student's propensity for success in distance courses (SmarterMeasure, 2011). Faculty participators, non-participators and administrators were all concerned about the quality of the students who enroll in distance education courses. Many colleges across the country are already using the SmarterMeasure assessment in combination with other college entrance assessments to assist in advising students about distance learning courses (SmarterMeasure, 2011). In lieu of an assessment tool, colleges may want to require that all students enroll in some type of college orientation course on succeeding in distance learning before being allowed to enroll in core distance courses.

Hybrid Course Formats

By moving more traditional courses to *hybrid* courses, where the course is a mix of online and in-class portions, faculty may have their need for in-class contact with students satisfied. Hybrid formats will also eliminate some of the issues with student cheating and difficulties presented by the hands-on nature of many career and technical education programs.

Recommendations for Further Research

Viable Program Definition

One of the limitations identified in this study was the definition of viable distance education program. More defined measures such as distance student course completion

rates or a measure of the cost verses learning effectiveness of the various programs may result in identifying high performing programs that are both efficient in their use of resources and effective in learning they provide.

Rural Community College Distance Education Programs

The definition of viable distance education program may have contributed to the results of rural community collegse appearing as having the majority of viable programs as well as the majority of poor performing programs. Is this an artifact of the measures of a viable program or what are the reasons that some rural institutions within the same state community college system have high performing programs and some have poor performing programs?

'No Opportunity' and 'Philosophy and Belief' Barriers

Another recommendation for further research is to study in greater depth the barrier categories of 'no opportunity' and 'philosophy and belief'. A more thorough review of college policies is recommended to determine how wide-spread the use of restrictive guidelines in limiting participation in distance education to full-time faculty or faculty with seniority. Additionally, a survey designed to learn about the beliefs and myths associated with distance education among faculty and administrators might provide insight for distance education leaders on how to improve professional development programs and better communicate the benefits of distance education.

Faculty Workload and Development Time

'Lack of time' was identified as an important barrier in the quantitative portion of the study but was not corroborated by the qualitative portion. Faculty and administrator

interviews indicated that release time was not an issue and that their colleges either addressed it in the distance education policy or compensated faculty with release time. To determine with more confidence how colleges handle faculty workloads and development time, distance education policies across a larger sample should be reviewed. Together with an improved definition of viable distance education program, this information would assist college leaders in developing a policy that supports faculty participators and would encourage more faculty to engage in distance education.

Survey Division Deans and Department Chairpersons

Division deans and department chairpersons have been given the responsibility to assign faculty to distance courses and approve the development of new courses at many community colleges. Therefore, a survey of their perceptions of the barriers and motivations of faculty to engage in distance education may provide more insight the gaps that exist between administrators view points and faculty.

Skills and Competencies of Distance Education Faculty

One of the points of separation between faculty and administrators in this study regarded the barrier of "lack of technological background". Faculty (both participators and non-participators) indicated that this is not a barrier whereas administrators felt it was a significant obstacle for faculty engagement in distance education. To better assess the importance of this barrier, the technology skills and competencies required to be an effective distance education instructor should be defined. This could be accomplished using proven 'job profiling' methods such as those used in workforce development to profile work tasks and skills and for developing specific training plans (ACT, 2011). The

job profile for an effective distance education instructor could be used as a baseline to measure against the skills and competencies of participators and non-participators. This information would help administrators in making decisions concerning professional development and in understanding faculty technology support needs.

Diffusion of Innovation and Applied Technology Instructors

Figure 3, which displays the diffusion of innovation attributes for non-participators, may have been altered by the presence of faculty non-participators from applied technology programs where the adoption of advanced technology takes place on a regular basis but distance education technology has not adequately advanced to replace or enhance the hands-on nature of the applied programs. Therefore, the data collected in this study could be filtered to eliminate responses from instructors from applied technology and health care programs. The diffusion of innovation scores for non-participators may then more closely reflect those predicted by the theory.

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APPENDIX A

FACULTY SURVEY INSTRUMENT - DEMOGRAPHICS

1. Faculty Demographics

Directions: Answer the following questions based on your current status at your institution of employment for the year 2010-2011.

Please attempt to answer the questions to the best of your knowledge.

***1. Have you ever been asked to:**

	Yes	No
Teach a distance education course?	◯	◯
Co-teach a distance education course?	◯	◯
Design a distance education course?	◯	◯

***2. Have you ever contemplated teaching, co-teaching, or designing a distance education course?**

◯ No

◯ Yes

If you have contemplated but have not actually engaged in distance education, please specify why you did not pursue this method of instruction.

***3. Which of these statements most accurately describes yourself (check one):**

◯ I start using new technologies without support or guidance from administration

◯ I willingly try new technologies with support and guidance from administration

◯ I feel positive about new learning technologies, but wait to try them until after colleagues have used the technology successfully before jumping in

◯ I am skeptical of new learning technologies, but usually try the technologies well after colleagues have demonstrated its uses successfully

◯ I prefer classroom face-to-face instruction with minimal technology support (I may use PowerPoint or Smart Boards)

***4. What subject areas do you teach (i.e. welding, nursing, math, etc.)?**

1.

2.

3.

4.

5.

***5. Please indicate your gender.**

◯ Female

◯ Male

***6. What is your age?**

Age

***7. What is the status of your position?**

◯ Full-time (30 plus hours per week with benefits)

◯ Part-time (less than 30 hours per week with no benefits)

***8. How many distance education course sections do you typically teach during the fall and spring semesters? If zero, please enter zero for both boxes.**

Distance education is defined as developing or teaching synchronous, asynchronous, web-based, or any instructional delivery method that separates you physically from your students.

Fall Course Sections

Spring Course Sections

***9. How many years have you been teaching in the community colleges?**

Years teaching in community colleges

10. In what year did you first teach a course section via distance education at your institution? If you have never taught a distance education course, you may skip this question.

Year

11. Do you teach and/or design distance education courses while teaching traditional education courses during the academic year?

◯ No

◯ Yes

If yes, how many hours a week do you spend developing distance education courses?

***12. How recently have you participated in training on distance education technology or pedagogy?**

- ◯ Past month
- ◯ Past 6 months
- ◯ Past year
- ◯ Past 2 years
- ◯ Past 5 or more years
- ◯ Never

13. How many distance education technology or pedagogy training courses have you attended in the last three years? Enter 999, if you do not remember.

Distance Education Training _____

Pedagogy or Instruction Techniques Training _____

***14. How would you rate your computer skills?**

- ◯ Expert (possessing special knowledge or ability; performs skillfully)
- ◯ Above Average
- ◯ Average (possessing nominal skills or ability; requires assistance)
- ◯ Below Average
- ◯ Poor (lacking skills or ability)

15. How would you rate your skills at teaching distance education courses?

- ◯ Expert (possessing special knowledge or ability; performs skillfully)
- ◯ Above Average
- ◯ Average (possessing nominal skills or ability; requires assistance)
- ◯ Below Average
- ◯ Poor (lacking skills or ability)

***16. In which environment do you prefer or feel most comfortable?**

- ◯ Traditional Classroom
- ◯ Distance Education Synchronous Environment
- ◯ Distance Education Asynchronous Environment
- ◯ Blended Distance Education (Synchronous and Asynchronous)

17. How would you rate your use of your college's distance technology (such as Black Board, Moodle, WebCT or other specific technology)?

- ◯ Expert (possessing special knowledge or ability; performs skillfully)
- ◯ Above Average
- ◯ Average (possessing nominal skills or ability; requires assistance)
- ◯ Below Average
- ◯ Poor (lacking skills or ability)

***18. Please select the statement that best describes your first experience with new technology (i.e. on-line course technology, Blackboard, IPad, smartphone, internet, social media, etc.).**

- ◯ I was anxiously waiting the release of the new technology or was in line hours before the store opened to purchase the technology.
- ◯ Within days of the release of the new technology, I would read the reviews online or ask my peers their thoughts before buying or engaging in use of the technology.
- ◯ I would wait a few weeks or months to see what users or my peers have to say, then purchase or engage in using the technology.
- ◯ I would wait another year or longer until my technology needed replacing or were required by administration to begin using the technology.
- ◯ I have avoided using new technology such as social media, IPads, or smartphones.

APPENDIX B

FACULTY SURVEY INSTRUMENT – SELF-ASSESSMENT

2. Faculty Self-Assessment

***1. Please rate the extent to which you agree the statements listed down the left-hand column are BARRIERS to your participation in distance education. The barriers in this section represent obstacles that your institution may be able to impact through policy or procedure.**

Distance education is defined as developing or teaching synchronous, asynchronous, web-based, or any instructional delivery method that separates you physically from your students.

	Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
Concern about faculty workload	○	○	○	○	○
Lack of distance education professional development	○	○	○	○	○
Lack of release time	○	○	○	○	○
Lack of support from administration	○	○	○	○	○
Budget for materials and expenses	○	○	○	○	○
Lack of merit pay	○	○	○	○	○
Lack of royalties paid to faculty on development materials	○	○	○	○	○
Lack of financial support from Institution (stipend, overload pay)	○	○	○	○	○
Lack of salary increase	○	○	○	○	○
Lack of credit toward promotions	○	○	○	○	○

***2. Please rate the extent to which you agree the statements listed down the left-hand column are BARRIERS to your participation in distance education. The barriers in this section represent obstacles that related to your profession and less dependent upon your institution's policies or procedures.**

	Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
Negative distance education experiences	○	○	○	○	○
Lack of professional status or respect	○	○	○	○	○
Lack of technological background	○	○	○	○	○
Concern about quality of students	○	○	○	○	○
Concern about quality of courses	○	○	○	○	○
Lack of recognition and rewards	○	○	○	○	○

***3. Please rate the extent to which you agree the statements listed down the left-hand column are BARRIERS to your participation in distance education. The barriers in this section represent obstacles that are personal in nature.**

	Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
Family concerns – time away from family	○	○	○	○	○
Additional responsibilities	○	○	○	○	○
Need for direct in-class contact with Students	○	○	○	○	○

4. Please list any additional barriers or obstacles you have encountered at your institution that keep you from participating in distance education.

1.
2.
3.
4.
5.

APPENDIX C

DISTANCE EDUCATION ADMINISTRATOR SURVEY INSTRUMENT

1. Administrator/college Demographics

Directions: Answer the following questions based on your current status at your institution of employment for the year 2010-2011.

Please attempt to answer the questions to the best of your knowledge.

***1. What is the name of your college?**

2. Which departments do you supervise?

***3. Please indicate your gender.**

- ◯ Female
- ◯ Male

***4. What is your age?**

Age

***5. How many years have you been working in the community colleges?**

Years

***6. Which of these statements most accurately describes yourself (check one):**

- ◯ I start using new technologies without support or guidance from superiors or information technology department assistance.
- ◯ I willingly try new technologies with support and guidance from my superiors or colleagues.
- ◯ I feel positive about new technologies, but wait to try them until after colleagues have used the technology successfully before jumping in
- ◯ I am skeptical of new technologies, but usually try the technologies well after colleagues have demonstrated its uses successfully
- ◯ I prefer to use minimal technology in my daily work routine (I may use my PC for word processing or email)

7. How many years have faculty at your institution been involved in developing and delivering distance education courses?

Total years

8. How many years have you specifically been associated with distance education?

Total years

***9. Which of the following have you done most recently?**

- ◯ Taught a distance education course
- ◯ Taught a distance education workshop
- ◯ Designed a distance education course
- ◯ Participated in a formal distance education workshop for administrators
- ◯ Participated in a formal distance education workshop for instructors
- ◯ None of the above

***10. Approximately what percentage of your faculty (full and part-time together) currently participate in distance education?**

- ◯ 20% or less
- ◯ 21% - 49%
- ◯ 50% - 79%
- ◯ 80% or greater

***11. Approximately how many distance education courses does your college offer in a semester?**

- ◯ 10 – 20
- ◯ 21-50
- ◯ 51-100
- ◯ 101 – 500
- ◯ 500 or more

***12. Please select the statement that best describes your first experience with new technology (i.e. on-line course technology, Blackboard, Ipad, smartphone, internet, social media, etc.).**

- ◯ I was anxiously waiting the release of the new technology or was in line hours before the store opened to purchase the technology.
- ◯ Within days of the release of the new technology, I would read the reviews online or ask my peers their thoughts before buying or engaging in use of the technology.
- ◯ I would wait a few weeks or months to see what users or my peers have to say, then purchase or engage in using the technology.
- ◯ I would wait another year or longer until my technology needed replacing or were required by the IT department to begin using the technology.
- ◯ I have avoided using new technology such as social media, Ipads, or smartphones.

APPENDIX D

DISTANCE EDUCATION ADMINISTRATOR SURVEY INSTRUMENT – SELF-ASSESSMENT

2. Administrator Self-Assessment

***1. Please rate the extent to which you agree the statements listed down the left-hand column are BARRIERS to your institution's faculty participation in distance education. The barriers in this section represent obstacles that may be impacted by your institution's policy or procedures.**

Distance education is defined as developing or teaching synchronous, asynchronous, web-based, or any instructional delivery method that separates you physically from your students.

	Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
Concern about faculty workload	○	○	○	○	○
Lack of distance education professional development	○	○	○	○	○
Lack of release time	○	○	○	○	○
Lack of support from administration	○	○	○	○	○
Budget for materials and expenses	○	○	○	○	○
Lack of merit pay	○	○	○	○	○
Lack of royalties paid to faculty on development materials	○	○	○	○	○
Lack of financial support from institution (stipend, overload pay)	○	○	○	○	○
Lack of salary increase	○	○	○	○	○
Lack of credit toward promotions	○	○	○	○	○

***2. Please rate the extent to which you agree the statements listed down the left-hand column are BARRIERS to your institution's faculty participation in distance education. The barriers in this section represent obstacles related to being a faculty member and may not be controlled or impacted by your institution's policies or procedures.**

	Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
Negative distance education experiences	○	○	○	○	○
Lack of professional status or respect	○	○	○	○	○
Lack of technological background	○	○	○	○	○
Concern about quality of students	○	○	○	○	○
Concern about quality of courses	○	○	○	○	○
Lack of recognition and rewards	○	○	○	○	○

***3. Please rate the extent to which you agree the statements listed down the left-hand column are BARRIERS to your institution's faculty participation in distance education. The barriers in this section represent obstacles that are more personal in nature.**

	Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
Family concerns – time away from family	○	○	○	○	○
Additional responsibilities	○	○	○	○	○
Need for direct in-class contact with Students	○	○	○	○	○

4. Please list any additional barriers or obstacles you believe may be keeping your faculty from participating in distance education.

1. _____
2. _____
3. _____
4. _____
5. _____

APPENDIX E

FACULTY INTERVIEW SHEET

Guiding Research Question

This study is designed to expand upon the understanding of the barriers that inhibit community college faculty participation in distance education (faculty participation in distance education includes both development and teaching of distance instruction). Barriers to participation in distance education include intrinsic, extrinsic, and personal barriers. Intrinsic barriers are closely associated with the instructor's inner motivations and fear such as previous distance education experience, fear of technology, or lack of recognition. Extrinsic barriers are those that are related to the institution such as technology support, policies, or workload demands. Personal barriers include age, gender, or family situation.

Thank you for your participation in this study.

1. What is your college's policy on distance course development?

    a. What should your college's policy be relative to development of distance courses?

2. Does your institution offer any form of compensation for developing and delivering distance courses in the form of money or time? Explain.

    a. Share how you are compensated for your intellectual property as related to distance education course content?

    b. How does this compensation or lack of compensation affect your desire or ability to participate in distance education?

3. Does the availability of course development time at your institution promotes or hinders your distance education efforts.

4. How has your institution changed organizationally due to distance education efforts?
    a. How have these changes promoted or hindered your efforts to participate in distance education?

    b. How does departmental leadership positively or negatively impact your efforts to participate in distance education?

    c. Has distance education led to curriculum changes in your department and do you view these changes positively or negatively? Please explain.

5. Has your institution recognized the efforts of faculty participating in distance education and does this positively or negatively impact your decision to participate in distance education?

6. Please share how your institution's efforts at preparing faculty in both pedagogical and technical skills for online learning either promote or hinder your efforts to teach online.

7. How does the institution's infrastructure consisting of a course management system either positively or negatively impacts your efforts to participate in distance education?

8. What are your top three personal barriers (or reasons) that challenge (or are preventing) your participation in distance education?

    a. Do you believe your age or experience negatively or positively impacts your decision to participate in distance education?

APPENDIX F

ADMINISTRATOR INTERVIEW SHEET

Guiding Research Question

This study is designed to expand upon the understanding of the barriers that inhibit community college faculty participation in distance education (faculty participation in distance education includes both development and teaching of distance instruction). Barriers to participation in distance education include intrinsic, extrinsic, and personal barriers. Intrinsic barriers are closely associated with the instructor's inner motivations and fear such as previous distance learning experience, fear of technology, or lack of recognition. Extrinsic barriers are those that are related to the institution such as technology support, policies, or workload demands. Personal barriers include age, gender, or family situation.

Thank you for your participation in this study.

1. What is your college's policy on distance course development?

    a. What should your college's policy be relative to development of distance courses?

2. Does your institution offer any form of compensation to faculty for developing and delivering distance courses in the form of money or time? Explain.

    a. Share how your faculty are compensated for their intellectual property as related to distance education course content?

    b. How does this compensation or lack of compensation affect their desire or ability to participate in distance education?

3. Does the availability of course development time at your institution promotes or hinders your college's distance education efforts.

4. How has your institution changed organizationally due to distance education efforts? How have these changes promoted or hindered the college's efforts to participate in distance education?

    a. How does departmental leadership positively or negatively impact your college's efforts to participate in distance education?

    b. Has distance education led to broad curriculum changes at your college and do you view these changes positively or negatively? Please explain.

5. Has your institution recognized the efforts of faculty participating in distance education and does this positively or negatively impact their decision to participate in distance education?

6. What pedagogical and technical skills training are provided by your college relative to distance education?

    a. Please share how your institution's efforts at preparing faculty in both pedagogical and technical skills for online learning either promote or hinder their efforts to teach online.

7. How does the institution's infrastructure consisting of a course management system either positively or negatively impacts faculty efforts to participate in distance education?

8. What are the top three personal barriers (or reasons) that challenge (or are preventing) faculty at your institution from participation in distance education?

    a. Do you believe the age or experience or your faculty negatively or positively impacts their decision to participate in distance education?

APPENDIX G

BARRIER ANALYSIS TABLES

Table G.1

Barrier Statement Identifier Key

Barrier Statement	Barrier Identifier
Concern about faculty workload	1
Lack of distance education professional development	2
Lack of release time	3
Lack of support from administration	4
Budget for materials and expenses	5
Lack of merit pay	6
Lack of royalties paid to faculty on development	7
Lack of financial support from Institution (stipend, overload pay)	8
Lack of salary increase	9
Lack of credit toward promotions	10
Negative distance education experiences	11
Lack of professional status or respect	12
Lack of technological background	13
Concern about quality of students	14
Concern about quality of courses	15
Lack of recognition and rewards	16
Family concerns – time away from family	17
Additional responsibilities	18
Need for direct in-class contact with Students	19

Table G.2

Faculty Descriptive Statistical Analysis

		Barriers																			
Faculty		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
Part.	Mn	3.4	2.9	3.3	2.7	2.9	3.3	3.1	3.3	3.5	3.2	2.5	2.5	2.4	3.3	3.0	2.7	2.5	3.1	3.3	
		9	0	8	1	8	1	7	3	0	1	4	1	3	0	9	7	4	2	0	
	N	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
		93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	87	
	Std.	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.2	1.2	1.1	1.1	1.2	1.2	
	Dev	08	11	43	89	39	69	12	59	94	30	44	77	96	76	90	24	32	47	68	
		60	41	69	94	32	65	27	47	13	12	30	20	07	72	13	71	76	45	59	
Non-	Mn	3.4	3.0	3.3	2.8	3.0	3.1	3.0	3.2	3.3	3.1	2.7	2.5	2.8	3.3	3.4	2.6	2.7	3.3	3.9	
Part		32	59	33	22	82	63	96	60	90	06	30	93	51	05	96	59	51	31	78	
		6	1	3	7	7	1	9	0	1	4	5	4	1	0	5	6	8	8	6	
	N	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	
		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	1	
	Std	1.2	1.1	1.1	1.0	1.1	1.0	1.0	1.0	1.1	1.0	1.0	.95	1.2	1.1	1.1	.92	1.1	1.1	1.1	
	Dev	08	28	16	23	08	59	22	92	44	46	83	64	15	43	80	74	08	77	00	
		02	61	44	08	03	54	29	19	36	56	35	7	63	35	15	4	92	33	66	
Total	Mn	3.4	2.9	3.3	2.7	3.0	3.2	3.1	3.3	3.4	3.1	2.5	2.5	2.5	3.3	3.2	2.7	2.6	3.1	3.4	
		73	42	69	42	07	65	52	07	61	78	89	34	47	02	01	39	01	78	82	
		0	6	4	7	3	8	4	4	7	1	7	3	5	1	8	4	6	9	1	
	N	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	
		16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	15	08	

Table G.3

Faculty Participator Barrier Responses

	Barrier Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
N	Valid	1089	1089	1089	1089	1089	1089	1089	1089	1089	1089	1089	1089	1089	1089	1089	1089	1089	1089	1083
	Missing	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	48
Median		4.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	4.00	3.00	2.00	2.00	2.00	4.00	3.00	3.00	2.00	3.00	4.00

Table G.4

Faculty Non-participator Barrier Responses

	Barrier Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
N	Valid	423	423	423	423	423	423	423	423	423	423	423	423	423	423	423	423	423	422	421
	Missing	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	708	709	710
Median		4.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	4.00	3.00	3.00	4.00	4.00

Table G.5

Administrator Barrier Responses

	Barrier Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
N	Valid	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77
	Missing	1054	1054	1054	1054	1054	1054	1054	1054	1054	1054	1054	1054	1054	1054	1054	1054	1054	1054	1054
	Median	4.00	3.00	3.00	2.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	4.00	4.00	4.00	3.00	3.00	4.00	4.00

Table G.6

Faculty Participator in DE to Faculty Non-participator in DE Comparison

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Barrier 1	Between Groups	.954	1	.954	.654	.419
	Within Groups	2210.937	1514	1.460		
	Total	2211.891	1515			
Barrier 2	Between Groups	7.961	1	7.961	5.632	.018
	Within Groups	2140.046	1514	1.414		
	Total	2148.007	1515			
Barrier 3	Between Groups	.763	1	.763	.591	.442
	Within Groups	1954.377	1514	1.291		
	Total	1955.140	1515			
Barrier 4	Between Groups	3.750	1	3.750	2.856	.091
	Within Groups	1987.920	1514	1.313		
	Total	1991.670	1515			
Barrier 5	Between Groups	3.343	1	3.343	2.615	.106
	Within Groups	1935.577	1514	1.278		
	Total	1938.920	1515			
Barrier 6	Between Groups	6.189	1	6.189	4.762	.029
	Within Groups	1967.681	1514	1.300		
	Total	1973.870	1515			

Table G.6. Continued

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Barrier 7	Between Groups	1.804	1	1.804	1.524	.217
	Within Groups	1791.998	1514	1.184		
	Total	1793.801	1515			
Barrier 8	Between Groups	1.315	1	1.315	1.010	.315
	Within Groups	1971.442	1514	1.302		
	Total	1972.757	1515			
Barrier 9	Between Groups	3.014	1	3.014	2.163	.142
	Within Groups	2109.767	1514	1.394		
	Total	2112.781	1515			
Barrier 10	Between Groups	3.018	1	3.018	2.460	.117
	Within Groups	1856.895	1514	1.226		
	Total	1859.913	1515			
Barrier 11	Between Groups	11.629	1	11.629	9.145	.003
	Within Groups	1925.170	1514	1.272		
	Total	1936.799	1515			
Barrier 12	Between Groups	2.048	1	2.048	1.875	.171
	Within Groups	1653.169	1514	1.092		
	Total	1655.216	1515			
Barrier 13	Between Groups	54.068	1	54.068	42.293	.000
	Within Groups	1935.513	1514	1.278		
	Total	1989.580	1515			
Barrier 14	Between Groups	.005	1	.005	.003	.956
	Within Groups	2331.628	1514	1.540		
	Total	2331.633	1515			
Barrier 15	Between Groups	50.922	1	50.922	32.052	.000
	Within Groups	2405.313	1514	1.589		
	Total	2456.235	1515			
Barrier 16	Between Groups	3.743	1	3.743	3.249	.072
	Within Groups	1744.338	1514	1.152		
	Total	1748.081	1515			
Barrier 17	Between Groups	13.234	1	13.234	10.435	.001
	Within Groups	1920.122	1514	1.268		
	Total	1933.356	1515			

Table G.6. Continued

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Barrier 18	Between Groups	13.670	1	13.670	9.060	.003
	Within Groups	2282.854	1513	1.509		
	Total	2296.524	1514			
Barrier 19	Between Groups	143.992	1	143.992	96.100	.000
	Within Groups	2256.524	1506	1.498		
	Total	2400.517	1507			

Table G.7

Faculty Participator in DE to DE Administrator Comparison

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Barrier 1	Between Groups	.023	1	.023	.016	.899
	Within Groups	1688.354	1168	1.446		
	Total	1688.377	1169			
Barrier 2	Between Groups	1.439	1	1.439	.981	.322
	Within Groups	1713.406	1168	1.467		
	Total	1714.845	1169			
Barrier 3	Between Groups	1.609	1	1.609	1.233	.267
	Within Groups	1524.169	1168	1.305		
	Total	1525.779	1169			
Barrier 4	Between Groups	13.059	1	13.059	9.347	.002
	Within Groups	1631.932	1168	1.397		
	Total	1644.991	1169			
Barrier 5	Between Groups	.006	1	.006	.004	.947
	Within Groups	1540.460	1168	1.319		
	Total	1540.466	1169			
Barrier 6	Between Groups	4.627	1	4.627	3.404	.065
	Within Groups	1587.728	1168	1.359		
	Total	1592.356	1169			

Table G.7. Continued

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Barrier 7	Between Groups	7.214	1	7.214	5.778	.016
	Within Groups	1458.400	1168	1.249		
	Total	1465.615	1169			
Barrier 8	Between Groups	7.631	1	7.631	5.550	.019
	Within Groups	1606.048	1168	1.375		
	Total	1613.679	1169			
Barrier 9	Between Groups	1.954	1	1.954	1.368	.242
	Within Groups	1668.012	1168	1.428		
	Total	1669.966	1169			
Barrier 10	Between Groups	1.704	1	1.704	1.350	.246
	Within Groups	1474.475	1168	1.262		
	Total	1476.179	1169			
Barrier 11	Between Groups	8.706	1	8.706	6.807	.009
	Within Groups	1493.842	1168	1.279		
	Total	1502.548	1169			
Barrier 12	Between Groups	.159	1	.159	.140	.708
	Within Groups	1326.094	1168	1.135		
	Total	1326.253	1169			
Barrier 13	Between Groups	125.951	1	125.951	106.124	.000
	Within Groups	1386.207	1168	1.187		
	Total	1512.158	1169			
Barrier 14	Between Groups	3.037	1	3.037	1.904	.168
	Within Groups	1863.216	1168	1.595		
	Total	1866.253	1169			
Barrier 15	Between Groups	4.969	1	4.969	3.043	.081
	Within Groups	1907.101	1168	1.633		
	Total	1912.069	1169			
Barrier 16	Between Groups	1.951	1	1.951	1.565	.211
	Within Groups	1456.035	1168	1.247		
	Total	1457.986	1169			
Barrier 17	Between Groups	2.430	1	2.430	1.915	.167
	Within Groups	1482.458	1168	1.269		
	Total	1484.889	1169			

Table G.7. Continued

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Barrier 18	Between Groups	15.524	1	15.524	10.198	.001
	Within Groups	1778.000	1168	1.522		
	Total	1793.525	1169			
Barrier 19	Between Groups	8.637	1	8.637	5.583	.018
	Within Groups	1797.535	1162	1.547		
	Total	1806.172	1163			

Table G.8

Faculty Non-participator in DE to DE Administrator Comparison

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Barrier 1	Between Groups	.168	1	.168	.127	.722
	Within Groups	658.862	499	1.320		
	Total	659.030	500			
Barrier 2	Between Groups	.878	1	.878	.667	.415
	Within Groups	656.930	499	1.316		
	Total	657.808	500			
Barrier 3	Between Groups	1.947	1	1.947	1.576	.210
	Within Groups	616.368	499	1.235		
	Total	618.315	500			
Barrier 4	Between Groups	30.930	1	30.930	28.810	.000
	Within Groups	535.705	499	1.074		
	Total	566.635	500			
Barrier 5	Between Groups	.532	1	.532	.393	.531
	Within Groups	674.821	499	1.352		
	Total	675.353	500			
Barrier 6	Between Groups	1.346	1	1.346	1.188	.276
	Within Groups	565.221	499	1.133		
	Total	566.567	500			

Table G.8. Continued

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Barrier 7	Between Groups	5.194	1	5.194	4.630	.032
	Within Groups	559.756	499	1.122		
	Total	564.950	500			
Barrier 8	Between Groups	7.995	1	7.995	6.017	.015
	Within Groups	662.991	499	1.329		
	Total	670.986	500			
Barrier 9	Between Groups	1.235	1	1.235	.935	.334
	Within Groups	658.925	499	1.320		
	Total	660.160	500			
Barrier 10	Between Groups	.693	1	.693	.648	.421
	Within Groups	533.486	499	1.069		
	Total	534.180	500			
Barrier 11	Between Groups	1.378	1	1.378	1.324	.250
	Within Groups	519.452	499	1.041		
	Total	520.830	500			
Barrier 12	Between Groups	.263	1	.263	.312	.577
	Within Groups	420.671	499	.843		
	Total	420.934	500			
Barrier 13	Between Groups	60.518	1	60.518	49.455	.000
	Within Groups	610.623	499	1.224		
	Total	671.142	500			
Barrier 14	Between Groups	2.853	1	2.853	2.435	.119
	Within Groups	584.684	499	1.172		
	Total	587.537	500			
Barrier 15	Between Groups	2.614	1	2.614	2.033	.155
	Within Groups	641.797	499	1.286		
	Total	644.411	500			
Barrier 16	Between Groups	6.623	1	6.623	7.408	.007
	Within Groups	446.111	499	.894		
	Total	452.735	500			
Barrier 17	Between Groups	.582	1	.582	.505	.478
	Within Groups	575.825	499	1.154		
	Total	576.407	500			

Table G.8. Continued

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Barrier 18	Between Groups	5.170	1	5.170	4.156	.042
	Within Groups	619.518	498	1.244		
	Total	624.688	499			
Barrier 19	Between Groups	14.079	1	14.079	14.291	.000
	Within Groups	489.636	497	.985		
	Total	503.715	498			

APPENDIX H

INTERVIEW RESPONSES

Faculty Interview Question 1. What is your college's policy on distance course development?

Top performing large urban college faculty responses:

> "All courses must be developed per state requirements based on curriculum or CCE guidelines for online course development (whether existing or new course). Department heads or directors work with instructors and/or program developers. Proper paperwork must be submitted for approval."

> "All online students must log into Blackboard at least once a week even if you do not have work to complete. This is to comply with the audit attendance that is done for online classes. Statistics are run to see how many and when each student came online during the semester."

Top performing small rural college faculty response:

> "Internet courses are delivered through personal computers connected to the Internet. Students review lessons, lectures, readings, and related research sites online. They may email homework, communicate with the instructor, or take tests via the Internet. Students enrolled in an Internet course are required to complete the same requirements as the traditional class and will earn the same credit. Students registering for Internet Courses can attend an Orientation for Online Courses that will introduce students to distance learning and familiarize students with using the Blackboard system."

Low performing large urban college faculty responses:

> "The college is very supportive of distance course development. The college pays a stipend to faculty who develop a new course in Blackboard or Moodle. It used to be that the college paid for each new course a faculty member developed. That has been changed, currently faculty are paid if they; complete a 10 hour blackboard or moodle training course and teach at least one course in that program. If a faculty member has been using blackboard but willing to convert to moodle, the college will pay a stipend if the above two factors are meet."

Faculty Interview Follow-up to Question 1. What should your college's policy be relative to development of distance courses?

Top performing large urban college faculty responses:

> "No change- the college must follow state guidelines."
>
> "I feel it should comply as such since we have to show proof that an individual actually logged into the online class."

Top performing small rural college faculty response:

> "No comment."

Low performing large urban college faculty responses:

> "I think the current policy is fair. Instructors are motivated to try teaching a distance course, but not being paid extra for 'doing their job'."

Faculty Interview Question 2. Does your institution offer any form of compensation for developing and delivering distance courses in the form of money or time?

Top performing large urban college faculty responses:

> "This totally depends on the department and the status of the instructor. This developmental/delivery time may already included in the salary (if full-time), a one-time developmental stipend if the class is being developed, or on a per-class basis if the instructor is part-time. Developing and delivering distance courses are two different things."
>
> "At this time, additional compensation for the courses I delivered are not offered."

Top performing small rural college faculty response:

> "Not that I am aware of."

Low performing large urban college faculty responses:

> "The college pays a stipend to faculty who develop a new course in Blackboard or Moodle. It used to be that the college paid for each new course a faculty member developed. That has been changed, currently faculty are paid if they; complete a 10 hour blackboard or moodle training course and teach at least one

course in that program. If a faculty member has been using blackboard but willing to convert to moodle, the college will pay a stipend if the above two factors are meet."

Faculty Interview Follow-up to Question 2. Share how you are compensated for your intellectual property as related to distance education course content?

Top performing large urban college faculty responses:

"One time stipend if the class is new and being developed, but no royalties or any other compensation for IP."

"We are currently not using intellectual property. This online class consists of copyright products from WIN."

Low performing large urban college faculty responses:

"We are not compensated for our intellectual property, instead we are compensated for completing relevant training and teaching a course. For example, a faculty member that completes blackboard training then teaches uses a VLC course will be compensated the same as a faculty member that teaches a course they developed on their own."

Faculty Interview Follow-up to Question 2. How does this compensation or lack of compensation affect your desire or ability to participate in distance education?

Top performing large urban college faculty responses:

"No effect on performance or desire to participate."

"No adverse reaction at all. I'm assisting the students in getting prepared to take the Career Readiness Certificate."

Low performing large urban college faculty responses:

"Having the compensation for training and teaching a new course was a benefit for me. I had already decided to teach in Blackboard before I learned of the compensation. Same when I switched from blackboard to moodle. I had already decided to switch to moodle when I learned I would be eligible for compensation.

I do think having compensation for intellectual property would be beneficial as an online course requires a higher level of intellectual property than seated classes require. Compensation for developing interactive SoftChalk files or virtual components or even camtasia files would encourage faculty to do so. I find

online courses to be very time consuming and challenging, in a good way. For me, online courses require much more preparatory time, grading time, interacting time, etc...than seated classes. Having compensation for going above and beyond, which many of us do, would be wonderful. "

Faculty Interview Question 3. Does the availability of course development time at your institution promotes or hinders your distance education efforts.

Top performing large urban college faculty responses:

"No effect on my performance."

"The availability of course development time has no bearings."

Top performing small rural college faculty response:

"Very little course development time may hinder distance education."

Low performing large urban college faculty responses:

" It used to not be an issue. But in the last few years the institution has increased our professional development hours from 10 to 30, added Benchmarking, added Peer Observations, added Critical Thinking Interventions, Common Questions and Data Collection. It seems as each new year starts, faculty is getting more and more extra-curricular responsibilities. These responsibilities deter from being able to develop and improve distance education classes."

Faculty Interview Question 4.How has your institution changed organizationally due to distance education efforts?

Top performing large urban college faculty responses:

"The college continues to support online learning and many professional development classes are available to assist instructors who want to learn about distance education. Continuous update classes on Moodle and Blackboard are available including open labs. This is not a change but a continued effort."

"No change at all within our department."

Top performing small rural college faculty response:

"Stronger focus on distance education courses by offering more of them."

Low performing large urban college faculty responses:

> "Each department has a distance education liaison; this person disseminates information from higher ups about course previews, guest access, etc... Basically making sure the faculty are staying current with deadlines associated with distance education courses.
>
> The old organization system was to have a Distance Education Support and Testing Center housed under Academic Support. This has just changed, now we have a Senior Dean who resides over Strategic Innovations that includes the Distance Education Support. And, we have a Senior Dean who resides over Instructional Support that includes the Testing Center. The oversight of distance education courses remains discipline based. The Deans of the appropriate divisions oversee the distance education courses as they would the traditional seated courses."

Faculty Interview Follow-up to Question 4. How have these changes promoted or hindered your efforts to participate in distance education?

Top performing large urban college faculty responses:

> "Positively reinforces online classes."
>
> "None."

Top performing small rural college faculty response:

> "They have not hinder my participation, but have increased it."

Low performing large urban college faculty responses:

> "These changes have significantly promoted my efforts in distance education. I cannot fathom having learned blackboard or moodle without having access to the wonderful workshops offered here."

Faculty Interview Follow-up to Question 4. How does departmental leadership positively or negatively impact your efforts to participate in distance education?

Top performing large urban college faculty responses:

> "This answer will depend entirely on the department and whether CCE or curriculum. My specific department supported online learning in 2003. Additional

classes are added each year. Many classes may not fit well with distance education or they may not be allowed due to specific restrictions."

"It has no negative bearings."

Top performing small rural college faculty response:

"It's neutral- neither positive nor negative."

Low performing large urban college faculty responses:

"The current departmental leadership is very supportive of distance education. What seems to have a negative impact in other faculty's' perspectives on distance education. I receive a got bit of teasing and at times harassment for my online teaching as many consider it to be 'easy', 'not a real job', 'not really teaching' and comments of the like. Faculty that teaches online or have attempted seem to realize the true nature of distance education and are supportive."

Faculty Interview Follow-up to Question 4. Has distance education led to curriculum changes in your department and do you view these changes positively or negatively? Please explain.

Top performing large urban college faculty responses:

"Again, my department supports online learning and continues to add online and web-enhanced classes to meet the needs of all students. This allows us to reach a larger target market."

"I work in continuing education so the changes do not impact curriculum."

Top performing small rural college faculty response:

"Changes include additional distance education courses. Positive change."

Low performing large urban college faculty responses:

"I am unaware of any changes in curriculum due to distance education. We have simply offered online and hybrid sections of our existing courses."

Faculty Interview Question 5. Has your institution recognized the efforts of faculty participating in distance education and does this positively or negatively impact your decision to participate in distance education?

Top performing large urban college faculty responses:

> "Many instructors have online, hybrid, and web-enhanced classes. There is no specific formal recognition of these efforts. However, many professional development classes allow instructors to share experiences and best practices.
>
> The college recognizes teaching excellence with awards given in the spring and fall. These awards are open to all instructors (those teaching online or not, as it should be.) Teaching online does not, by itself, make someone an excellent teaching. Not teaching online does not make someone a poor teacher. Many classes are more conducive to online learning than others. Many instructors use web-enhanced classes to integrate online learning when a total online class may not be favorable to reach learning outcomes.
>
> Recognition for online teaching (or lack of recognition) does not affect my decision to participate in distance education. This is part of my efforts to improve student performance and satisfaction."
>
> "I haven't received any recognition by providing my service. It really isn't needed since I enjoy what I do."

Top performing small rural college faculty response:

> "Yes, the college recognizes the efforts. No impact on my decision."

Low performing large urban college faculty responses:

> "No, this institution has not recognized the efforts of faculty participating in distance education. This does not impact my decision to teach via distance education, but it does wear on my morale."

Faculty Interview Question 6. Please share how your institution's efforts at preparing faculty in both pedagogical and technical skills for online learning either promote or hinder your efforts to teach online.

Top performing large urban college faculty responses:

> "Again, professional development classes are used to promote online instruction and course design / development. Open labs are available to help faculty develop, open, and close-out courses.
>
> If faculty needs help in any aspect of distance education, that help is available. Most faculty who teach distance education want to stay abreast of any and all new distance learning technology and how to use the technology effectively in our classes."
>
> "They promote and encourage you to take advantage of the new opportunities. I believe our institution provide the tools to become successful before they roll out any new products to any audiences. Then they educate the students."

Top performing small rural college faculty response:

> "During faculty trainings, we are updated on both pedagogical and technical skills for online learning. I personally look forward to hearing about best practices or new distance education techniques or formats like the use of social media tools or mobile learning."

Low performing large urban college faculty responses:

> "Faculty are to attend a 10 hour workshop series learning how to use blackboard or moodle before teaching a distance education course. The majority of this training is technical with a small amount of time spent on pedagogical information. However, other workshops can be taken to learn the pedagogical aspects of an effective distance education course. This policy is a great promoter for teaching successful online courses."

Faculty Interview Question 7. How does the institution's infrastructure consisting of a course management system either positively or negatively impacts your efforts to participate in distance education?

Top performing large urban college faculty responses:

> "No effect. Faculty can select either LMS."
>
> "The infrastructure consisting of course management positively affects participation in distance education because they train you on the benefits of utilizing the distance education products."

Top performing small rural college faculty response:

> "Institution's infrastructure positively impacts my efforts to participate because they provide me with distance education technical assistance."

Low performing large urban college faculty responses:

> "Initially we only had access to blackboard, which was fine. Then blackboard started updating and becoming incompatible with the browsers. The issues were significant and a real nightmare. If I did not have another option I would have stopped teaching distance education because of the technical issues associated with blackboard. At the time blackboard was becoming unreliable, moodle was becoming an option here. I learned how to use moodle and love it. Moodle is very user friendly and reliable for both faculty and students."

Faculty Interview Question 8. What are your top three personal barriers (or reasons) that challenge (or are preventing) your participation in distance education?

Top performing large urban college faculty responses:

> "No barriers. I have taught online since 2003. Online classes are determined each semester by the director when the schedule is completed."
>
> "The top three barriers that may challenge participation are: 1. Everyone does not own a computer 2. Lack of Skills 3. Prefer a Traditional Classroom Setting "

Top performing small rural college faculty response:

> "I have no personal barriers."

Low performing large urban college faculty responses:

> "I am participating in distance education. Currently I teach all my courses through distance education either online or as hybrid courses."

Faculty Interview Follow-up to Question 8. Do you believe your age or experience negatively or positively impacts your decision to participate in distance education?

Top performing large urban college faculty responses:

> "No."

> "I don't believe barriers exist with the age differences; it's a lack of a computer skill that may pose a problem."

Top performing small rural college faculty response:

> "My age does not impact my decision to participate in distance education. My experience impacts it some, because I believe I learn by doing and the more I teach and develop distance education courses the better I will become."

Low performing large urban college faculty responses:

> "I do not believe my age or experience impacted my decision to participate in distance education. I saw an opportunity about 5 years ago and decided I would try it. I do not consider myself to be a technical person (I don't have a smart phone, clouds are found in the sky, not sure what version of word is .doc and what one is .docx – really I'm not a technical person) but the resources here have allowed me to learn what I need to know to teach via distance education. I think the key is not age or experience but the willingness to learn and be open minded."

Administrator Interview Question 1. What is your college's policy on distance course development?

Top performing large urban college administrator response:

> "The college is committed to offering a distance option for all courses required for an AA degree as well as many electives and courses within a number of certificate programs. Many divisions maintain division masters of their online courses which can be provided to new online instructors and/or part-time online instructors for use within certain guidelines. If a course is not currently offered

online and a demand for online delivery is identified, the first option is to determine if the course has been developed by the Virtual Learning Community (VLC); if so, it will be downloaded, evaluated, and customized to meet the college's need. If not, potential instructors may be asked if they have a course that can be adapted for online delivery. If this is not available, the Division will determine if the demand warrants the assignment of reassigned-time or a stipend for this course's development."

Low performing large urban college administrator response:

"Faculty are expected to complete, at a minimum, basic LMS training offered by the distance education support department. Supervisors may waive the basic training requirement. We are in the planning process of creating a digital instructor certificate program."

Low performing small rural college administrator response:

"The procedure for offering a course online for the first time is as follows:

1. Division directors, program coordinators, or department chairs intending to begin or increase online course offerings should develop an implementation plan, with input from instructors and with the assistance of the Distance Learning Director. The implementation plan should include the current percentage of the program online, a semester-by-semester time line for adding specific online courses, and the percentage increase resulting from the new online offerings.
2. The initial implementation plan as well as any revisions to an earlier plan must be initiated within the first 3 weeks of the semester prior to the semester that a course will be offered online.
3. Once the program coordinator/department chair and the division director approve the implementation plan, the plan is submitted to the Distance Learning Director to verify that the courses have not already been offered online and that the increase in the percentage of the program reported on the plan is accurate.
4. The Distance Learning Committee reviews the implementation plan.
5. The plan is reviewed and approved by the Dean of Curriculum.
6. The Dean of Curriculum submits the implementation plan to the Curriculum Committee for review and approval.
7. If the planned increase in online offerings reaches either threshold—25-49% or 50% or more of the program is available online, the Dean of Curriculum is responsible for drafting a letter on behalf of the President to submit to SACS/COC."

Administrator Interview Follow-up to Question 1.What should your college's policy be relative to development of distance courses?

Top performing large urban college administrator response:

> "The current policies, both formal and informal, related to distance course development have served the College and its students quite well, resulting in a large inventory of distance courses. The 2009/2010 eLearning Advisory Committee recommended an emphasis on improving the quality of existing online offerings rather than on the development of new offerings. This leverages the investment that the College has already made and is consistent with the increasing sophistication of the online student body as well as the decreasing funds available for funding course development. Specialty areas that serve specific target populations may be identified for distance course development if grants or sponsors are available and/or future demand is predicted that will generate tuition sufficient to offset the costs of development."

Low performing large urban college administrator response:

> "In my opinion, faculty should be required to demonstrate basic computer skills prior to participating in a digital instructor certificate program."

Low performing small rural college administrator response:

> "I am currently satisfied with the College's policy relative to the development of distance courses."

Administrator Interview Question 2. Does your institution offer any form of compensation to faculty for developing and delivering distance courses in the form of money or time? Explain.

Top performing large urban college administrator response:

> "1997 through 2004, faculty were compensated and participated in a week long Summer Institute for course development. This was based on the college establishing an inventory of courses for online delivery. At this time compensation varies based on division policy and need for course."

Low performing large urban college administrator response:

"Yes. At the current time, faculty who complete basic training (6-week online course) and teach their *first* online or hybrid course within two semesters of completing training are paid $600 at the end of the semester that they teach their first course. Faculty may also qualify for $500 new course compensation per semester for each new online course or hybrid course that has never previously been taught in online or hybrid format at the college."

Low performing small rural college administrator response:

"The College does not offer any form of compensation to faculty for developing and delivering distance courses in the form of money or time. "

Administrator Interview Question 2. Share how your faculty are compensated for their intellectual property as related to distance education course content?

Top performing large urban college administrator response:

"No compensation"

Low performing large urban college administrator response:

"Please see copy of file from the college's *Employee Handbook* attached with this response: intellectual_property_chapter_9_FEB.15.2001.pdf"

Low performing small rural college administrator response:

"Courses created by instructors or staff, under the specific direction of the college, for the college's use within the scope of employment or pursuant to a written contract are owned by the college. The course developer is responsible for getting clearances and/or permission to use any material that is not original. Copyright guidelines are available in the Learning Resources Center."

Administrator Interview Question 2. How does this compensation or lack of compensation affect their desire or ability to participate in distance education?

Top performing large urban college administrator response:

"We have not observed a lack of desired based on no compensation for content.... but aware of the possibility of its existence."

Low performing large urban college administrator response:

"The compensation policy has been an incentive. As of today, we have 30 faculty registered for Basic Moodle training, and we are planning to open a new section."

Low performing small rural college administrator response:

"No evidence to present on the matter is available."

Administrator Interview Question 3. Does the availability of course development time at your institution promotes or hinders your college's distance education efforts.

Top performing large urban college administrator response:

"Lack of time may have more impact on the quality than the quantity. The development time has more effect on the creation of media rich courses and the incorporation of more sophisticated eLearning tools."

Low performing large urban college administrator response:

"Although release time was available to a number of faculty years ago, to my knowledge release time is not currently an option."

Low performing small rural college administrator response:

"The procedure for course development provides a consistent and manageable process for promoting our college's distance education efforts."

Administrator Interview Question 4. How has your institution changed organizationally due to distance education efforts? How have these changes promoted or hindered the college's efforts to participate in distance education?

Top performing large urban college administrator response:

"The College entered the distance education arena in 1977 with telecourses, adding interactive TV/cable courses in 1992, which were delivered from the Television Broadcast area. In 1997, in response to demand for Internet-based courses, a separate entity —the College Without Walls—was created within the Instructional Unit which incorporated the existing Instructional Development area, which had formerly focused primarily on videotaping projects. Online courses were developed in HTML by faculty who taught these same courses in the classroom and who were interested in the new technology. As course enrollments and the number of online courses grew, the College Without Walls

evolved into the Virtual Campus in 2002, which was headed by an associate dean and a division director, and had a budget for faculty training, support, and course development. The hiring and evaluation of online faculty was retained by the academic divisions. This is essentially the same structure that exists for distance education at the college today, except that the area is called eLearning/Instructional Development and is under the Dean of Professional Development and eLearning, still within the instructional unit of the College."

Low performing large urban college administrator response:

"No."

Low performing small rural college administrator response:

"Our Director of Distance Learning position became a full-time position this current fall 2011 semester. This has been a positive move for the department. In the past the director was part-time instructor and director. The schedule did not effectively provide the required time for the director to fully devote attention to all distance learning services, needs, and opportunities."

Administrator Interview Question 4. How does departmental leadership positively or negatively impact your college's efforts to participate in distance education?

Top performing large urban college administrator response:

"Varies ...based on department leadership style and the personalities of the faculty within those areas. "

Low performing large urban college administrator response:

"In some instances, departmental leadership has definitely hindered participation in distance learning in the past, but is less prevalent now."

Low performing small rural college administrator response:

"The College's departmental leadership positively impacts the College's efforts to participate in distance education opportunities through promoting professional development for faculty, staff , and students; providing access to a variety of distance learning services and resources; and engaging in collaborative efforts with other community colleges."

Administrator Interview Question 4. Has distance education led to broad curriculum changes at your college and do you view these changes positively or negatively? Please explain.

Top performing large urban college administrator response:

> "No, it has not changed the curriculum, just the delivery method which has led to use of new eLearning tools."

Low performing large urban college administrator response:

> "Not to my knowledge. In my opinion, distance learning is the wave of the future."

Low performing small rural college administrator response:

> "The College is focused on ensuring that all distance learning courses follow the established curriculum standards set by the College. Therefore, attention is given to whether the mode of delivery is appropriate for any course offered. This allows the College to ensure that any suggested or mandated curriculum change will support courses offered through distance learning, which is positive."

Administrator Interview Question 5. Has your institution recognized the efforts of faculty participating in distance education and does this positively or negatively impact their decision to participate in distance education?

Top performing large urban college administrator response:

> "Yes, via showcases, lunch & learns, demonstrations..."

Low performing large urban college administrator response:

> "No, other than the compensation policy."

Low performing small rural college administrator response:

> "The College has periodically recognized the efforts of faculty participating in distance education. This was due to one acquiring a grant or participating in distance learning professional development opportunities. Recognition is a positive action and does positively promote their desire for supporting distance education."

Administrator Interview Question 6. What pedagogical and technical skills training are provided by your college relative to distance education?

Top performing large urban college administrator response:

> "The college provides both face-2-face and online training that cover pedagogical and technical skills required for teaching distance courses in both Blackboard and Moodle Learning Management Systems (LMS). We also provide face-2-face, hands-on support labs to assist faculty with any technical questions related to their course development.
>
> Also, new online courses are required to be submitted for Quality Course Review (QCR) and faculty are encouraged to submit previous online content for QCR. Some of the technical courses include, Introductory courses in Blackboard and Moodle, Using Respondus, Using Panopto, Google Docs, etc."

Low performing large urban college administrator response:

> "Our training courses/calendar is posted online each semester:"

Low performing small rural college administrator response:

> "The College has and continues to provide professional development opportunities that promote pedagogical and technical skills training.
> - Developing student learning outcomes
> - Identifying learning styles
> - Student engagement
> - Learning/course management system training (Moodle)
> - How to manage learning teams/groups online"

Administrator Interview Question 6. Please share how your institution's efforts at preparing faculty in both pedagogical and technical skills for online learning either promote or hinder their efforts to teach online.

Top performing large urban college administrator response:

> "The college's eLearning works on a Division level and/or an individual basis with faculty to enhance online learning. We help divisions to provide basic foundation for online courses, and instructors are empowered to modify the Division's copy and personalize the courses. This will offer a starting point to the

faculty to begin their online instruction, build their online courses on a stronger platform, and not have to start from scratch.

We continue to update our relationship with major publishers. We work with publishers to connect their up-to-date content to our online faculty's courses upon request.

The college's eLearning constantly seeks faculty's feedback and look for better ways to improve the quality of support we offer to our faculty.

The college places a strong emphasis on Professional Development, and also provides various eLearning courses and Support Labs to assist faculty with their online learning."

Low performing large urban college administrator response:

"Most of the training that we offer focuses on technical skills, but pedagogy is included and should promote faculty efforts to deliver instruction online.'

Low performing small rural college administrator response:

"The efforts mentioned above help faculty to become more receptive, comfortable, and knowledgeable in enhancing their online teaching and student learning efforts."

Administrator Interview Question 7. How does the institution's infrastructure consisting of a course management system either positively or negatively impacts faculty efforts to participate in distance education?

Top performing large urban college administrator response:

"The college's institutional infrastructure supports dual LMSs (blackboard and moodle), which are both industry leaders in their delivery categories. There are many ongoing discussions throughout the campus concerning the wisdom of supporting dual LMSs, but to date, there are no plans for change. Many debate whether these dual systems are beneficial for stakeholders (teachers, learners, support staff, etc) because of greater opportunities for confusion and increased learning curve requirements.

Having said that, there remains robust support for and participation with both Blackboard and Moodle. 85% of the college's online course(s) are in Blackboard. The upcoming system upgrade provides faculty with new social media tools and

streamlined operations. These new features will allow for greater faculty/student collaboration and should enhance the engagement experience for all. It is for this reason that, overall, the currently course management system is seen positively."

Low performing large urban college administrator response:

"Faculty have low tolerance for a course management system that is not stable or for one that offers version upgrades that break tools that worked well in the previous version. Infrastructure is also critical, unless the CMS is hosted."

Low performing small rural college administrator response:

"Using Moodle has provided the College with a more flexible and accessible learning/course management system."

Administrator Interview Question 8. What are the top three personal barriers (or reasons) that challenge (or are preventing) faculty at your institution from participation in distance education?

Top performing large urban college administrator response:

"Teaching load, time involved in training and course development, computer skills"

Low performing large urban college administrator response:

1. "Personal preference for continuing to teach in a traditional classroom setting.
2. Lack of technical skills.
3. Belief that subject matter cannot be adequately presented online."

Low performing small rural college administrator response:

1. "Fear of change
2. Fear of technology
3. Budget
4. Time restraints"

Administrator Interview Question 8. Do you believe the age or experience or your faculty negatively or positively impacts their decision to participate in distance education?

Top performing large urban college administrator response:

> "We do not maintain any statistical data based on age & experience relative to the decision to participate in teaching online. Many of our veteran faculty have embraced distance learning. The full variety of age & experience contributes to a full spectrum of approaches to online teaching. We have seen no correlation between satisfaction level based on age or experience."

Low performing large urban college administrator response:

> "Yes and no. Age and experience are definitely a factor for some faculty."

Low performing small rural college administrator response:

> "I do believe that age and experience does influence one's decision to participate in distance education. For those on our faculty who still have not embraced this modality of learning and have no desire to embrace it, is largely due to age and experience."