NORMATIVE ANALYSIS OF INTERNET-MEDIATED DISTANCE EDUCATION POLICIES IN SELECTED LARGE COMMUNITY COLLEGES AND THEIR RELATED STATE SYSTEMS

By

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A DISSERTATION PRESENTED TO THE GRADUATE SCHOOL
OF THE UNIVERSITY OF FLORIDA IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

UNIVERSITY OF FLORIDA

2007

To my late parents, Robert F. and Pauline Y. Amason, who inspired me to a lifelong pursuit of knowledge. Neither of them had the chance to attend college yet intellectual curiosity drove them to become self-educated, lifelong learners in many disciplines. They demonstrated that one is never too old to learn and no subject is too difficult. I also dedicate this to my children, Danielle and Michael. May my efforts inspire them in the same ways as my parents inspired me.

ACKNOWLEDGMENTS

I extend my sincerest gratitude to Dr. David Honeyman for his guidance, encouragement, and concern during the writing of this dissertation. To Dr. David Quinn, I extend special thanks for his mentorship in the areas of qualitative analysis and study design. I am particularly grateful to Dr. Larry Tyree for his personal friendship and support throughout my time at the University of Florida. The kind concern, encouragement, and friendship from Dr. Dale Campbell and Dr. Dr. Andy McCollough were invaluable in assuring the success of this dissertation. These gentlemen were highly responsive to my requests and provided invaluable ideas and criticism that helped immensely in completing the research.

I thank each of the other faculty and staff members in the Department of Educational Administration and Policy for their assistance and guidance as I maneuvered through the complexities of a doctoral degree. I also thank my family, loved ones, and friends for their support and inspiration in the lengthy endeavor of pursuing a doctorate. Several paid a personal price for my success, and I owe each of them a debt of gratitude—more than I can ever repay.

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December 2007

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Distance education in the United States, particularly online technology-mediated education, has grown rapidly in post-secondary institutions. The fusion of computer, television, telecommunications, publishing, and other print media with technology-mediated education will likely result in three-dimensional experiences that may supplant the classroom, as it is currently known. Despite increasing acceptance of distance education and distance education technologies, some educators and many employers have expressed skepticism regarding nontraditional offerings.

This study was a normative analysis of policies and practices regarding technology-mediated distance education in community colleges. The study examined the current condition of distance education policy at three levels—state, consortia, and institutional. The study sought to identify the diffusion of such a policy by triangulating policy directives and program attributes at the state, consortium, and institutional levels to factors derived from policy analysis frameworks and acknowledged best practices. Thirty-seven community colleges and 15 states were included in a purposive sample. In 13 states where a state-level distance education consortium was identified, the consortium policies were analyzed.

The study indicated that state-level guidance was not consistent across states, and low policy diffusion across all factors was observed at state-level. This finding suggested that state directors of community colleges may need to reexamine statutory, strategic, and funding guidance to encourage more complete oversight of educational access, student success, infrastructure, and planning for Internet-mediated distance education.

In this study, institutional-level policy diffusion for students was near unity, suggesting that Internet-mediated distance education was moving toward a high level of consistency among institutions. The diffusion of policy appeared to increase in proportion to the policy-organization's proximity to students. States were farthest from students and had lower policy diffusion; institutions were closest to the student and had the greatest diffusion of distance education policy.

Faculty rewards were largely ignored at all levels, with overall low policy diffusion in the faculty factors. This may be interpreted as setting the stage for faculty resistance to more complete implementation of Internet-mediated distance education. States and institutions may find it advantageous to create more faculty rewards for engaging in online teaching.

CHAPTER 1
INTRODUCTION

Introduction

Online learning has taken a prominent place in academia. Distance education in the United States, particularly online technology-mediated education, has grown rapidly in post-secondary institutions. Approximately 3.2 million degree-seeking, post-secondary students were taking one or more online courses in the fall of 2005 (Allen & Seaman, 2006). This number represents an increase of more than 800,000 from the previous year. While this one-year increase is more than double the increase of any prior year, the growth since 2002 has been equally remarkable (Allen & Seaman, 2006). For example, the fall 2002 enrollment of students taking at least one online course was 1,602,970 (Allen & Seaman, 2005). The same statistics for the fall 2003 and fall 2004 enrollments were 1,971,397 and 2,329,783, respectively (Allen & Seaman, 2005). Distance education has grown at an annual rate of more than 18% from 2002 to 2006 (Allen & Seaman, 2006). By contrast, total undergraduate enrollments for all degree-granting institutions during the same period moved upward at a slower pace, increasing from 14.2 million to 14.9 million students or 4.9% (National Center for Education Statistics, 2006).

The technologies available to educators appear to change with great rapidity. Moore's Law, expressed by Gordon Moore, cofounder and chief executive officer of Intel Corporation, states that the capacity of computer chips doubles every 18 months, while cost for the same chips will decline by 50% during the same period (McCain & Jukes, 2001). Noted educator William Daggett suggested in 2001 that small portable computers, voice technology, and broadband technologies would converge in the 3 years between 2001 and 2004, and these technologies become features of the modern classroom. To see this prediction in action, observe higher education classrooms to see students linking their increasingly smaller and more powerful laptop

computers to the wireless Internet to research articles and contribute ideas in *real time* to class discussion. Indeed, the approximate doubling of online enrollment from 2002 to 2006 is testimony in support of the rapidity of technological change in higher education.

"The engine of change for the next revolution is cyberinfrastructure, a comprehensive phenomenon that involves the creation, dissemination, preservation and application of knowledge" (Bemet, 2007, p. B5). Internet bandwidth availability has been one cyberinfrastructure factor in the increased use of electronic media in distance education. There has been a logarithmic progression of bandwidth increase since 1984, facilitating faster connections and more information-rich online classrooms (Goff, 2002). In 2002, the amount of *un-lit* (i.e., unused) fiber optic cable in the United States was between 65% and 80% of the installed base, illustrating a significant excess capacity in the broadband Internet delivery mechanism (Langley, 2002). Corresponding to faster, cheaper chips, increasing rapid connections, and excess capacity, the Internet annual growth has been between 100% and 300%, while the cost of fiber optic bandwidth eroded from 6% to 50% annually (Langley, 2002). This erosion would suggest that the cost of using the Internet for education was dropping at a time when reports indicate that multimedia was becoming more in demand in the classroom (McCain & Jukes, 2001).

Statement of the Problem

The fusion of computer, television, telecommunications, publishing, and other print media with technology-mediated education will likely result in three-dimensional experiences that may supplant the classroom, as it is currently known (McCain & Jukes, 2001). McCain and Jukes asserted that higher education "must catch up or face the unenviable prospect of becoming irrelevant" (p. 69). The current director of the National Science Foundation, Arden L. Bement, stated, "We are entering a second revolution in information technology, one that may well usher

in a new technological age that will dwarf in sheer transformational scope and power, anything we have yet experienced in the current information age" (2007, p. B5). The confluence of technology and education with the rapid onset of Internet-mediated distance education prompted this study.

The rapid shift in technologies, coupled with increasing demand for access to higher education (National Center for Education Statistics, 2006), has created pressure on institutions to provide technology-mediated distance education courses in increasing numbers (Dahl, 2003). This trend has put some states into distance education overdrive. For example, California has experienced a three-fold increase in distance education course offerings from approximately 4,000 to 13,500 courses since 1998—almost totally due to the increase in online offerings (California Virtual College, 1999-2005). California expects to experience growth in distance education enrollments from approximately 4% in 1998 to nearly 20% in 2016 (California Virtual College, 1999-2005).

Additionally, states and institutions have perceived that distance education courses offer a lower cost alternative (Carnevale, 2005). Several cost-benefit analyses have supported distance education courses as less costly, while many studies support the notion that the educational outcomes are not diminished by distance (Irele, 1999). States and institutions were therefore increasingly open to offering distance education options, and senior educators have been more accepting of the medium as providing valid higher education outcomes (Allen & Seaman, 2006).

Technology-mediated distance education has become a major feature of collegiate academics in the United States, but it is not evenly deployed among all institutions. Larger institutions had more online education courses and greater online enrollment than do smaller schools (Allen & Seaman, 2006). Two-year institutions had more penetration of distance

education offerings than did 4-year institutions and research universities (Allen & Seaman, 2006).

Internet-mediated distance education has rapidly expanded and has grown beyond situations where the student and teacher are widely separated (McCoy & Sorensen, 2003). An increased interest in *distributed learning*—a blend of traditional classroom offerings using distance education technologies—has occurred (Eaton, 2002). Distance education policy therefore had begun to influence traditional classroom education, yet research on such policy was limited (McCoy & Sorensen, 2003).

Purpose

Despite increasing acceptance of distance education and distance education technologies applied in more traditional settings, some educators and many employers expressed skepticism regarding nontraditional offerings (Allen & Seaman, 2006; Carnevale, 2007; Fogg, 2007). A significant amount of public funding was allocated to Internet-mediated distance education without a corresponding in-depth examination of underlying policies (McCoy & Sorensen, 2003). A study was needed to identify whether or not technology-mediated distance education is coherent across states and institutions so that these quality concerns such as these may be allayed.

The purpose of the study was to conduct a normative analysis of policy on technology-mediated distance education in community colleges at state, consortia, and institutional levels to understand the diffusion of policy concepts in this increasingly central medium. Chen (1990a) classified program and policy evaluations into two categories: normative evaluation (focused upon policy and program design) and causative evaluation (focused upon policy and program outcomes). Normative evaluations are prescriptive statements regarding how a program should

be designed, based upon prior knowledge, research, theory, and practice (Scheirer, 1996). A normative evaluation therefore seeks to compare actual practice with the prescribed practice.

The thrust of this study was to compare policy directives and program attributes at the state, consortia, and institutional levels to factors derived from policy analysis frameworks and acknowledged best practices. Specifically, the *Interregional Guidelines for Electronically Offered Degree and Certificate Programs* (2nd ed.) (Middle States Commission on Higher Education, 2002) were adopted in 2002 by all six U.S. regional accrediting associations, as well as by two associations that specifically accredit community colleges (Lezberg, 2003). Part of the reason for such widespread adoption of a set of guidelines was the interregional aspect of technology-mediated distance education and the rise of enrollments in online education. In a period of only a few years, it has become possible for students in widely separated locations to enroll in large numbers in degree-granting programs despite significant distances. This shift in enrollment opportunity caused concern about the future viability of regionalism as a core concept for managing quality in American higher education (Lezberg, 2003). The resulting adoption of *Interregional Guidelines* represented a national-level set of standards with which to evaluate state and local institutional policy and programs.

Concurrent with development of the *Interregional Guidelines* previously described, several scholars broadened policy analysis frameworks for distance education (Simonson & Bauck, 2003). These policy frameworks considered the same topics as those contemplated in the *Interregional Guidelines,* thus setting the stage for development of factors for this study.

This study, therefore, compared state and institutional policies and programs against factors derived from policy analysis frameworks and the *Interregional Guidelines*. The goal of

the study was to discern the extent of diffusion for Internet-mediated distance education policy among states, consortia, and individual institutions. Specifically, this study sought to

- Determine the extent to which the states' distance education policies emulate policy analysis factors.
- Determine the extent of congruence of states' distance education consortia policies and program guidance with policy analysis factors.
- Determine the extent of congruence of community college institutional distance education policies and program guidance policy analysis factors.
- Propose guidelines for state-level model policy for community college online distance education programs.

Research Questions

This study was a normative analysis of state and institutional policies and practices regarding technology-mediated distance education in community colleges. The study sought to triangulate state, consortia, and institutional policies with policy analysis frameworks, regional accreditation policies, and best practices. Conceptual linkages exist between policies and programs, with policies being the larger in scope (Chen & Rossi, 1992). Therefore, to study one policy is to study the other policy.

Research questions included the following:

- Are there differences in distance education policies among the regional accrediting bodies, the states, consortia, and institutions?
- To what extent are states' community college distance education policies congruent with frameworks for policy analysis?
- To what extent are states' distance education consortia policies congruent with frameworks for policy analysis?
- To what extent are community college institutional distance education policies congruent with frameworks for policy analysis?

Significance of Study

Few ethnographic studies exist regarding the quality in distance education. This study fills that gap with an analysis of policies across state boundaries and at institutions representing the largest group of distance education providers—the community colleges (Allen & Seaman, 2006). The study sought to determine the extent of coherence of distance education policies since the introduction of the Internet as a viable educational medium. Coherence of such policies was seen as a measure of policy diffusion (Berry & Berry, 2007).

The study sought to elucidate the current condition of distance education policy at three levels—state, consortia, and institutional. Since the United States did not pursue national accreditation for institutions of higher learning, preferring instead to allow a largely self-organizing, regional-style system of accreditation, the *Interregional Guidelines for Electronically Offered Degree Programs* represented a *de facto* national standard (Lezberg, 2003). Given that enrollments in distance education programs grew at rapid rates, and community colleges represented a major locus of these enrollments (Allen & Seaman, 2006), the need arose for a coherent policy at state, consortium, and institutional levels. This study sought to identify the diffusion of such a policy and offer recommendations regarding creation of policies where gaps exist or where no policy exists.

Conceptual Framework

The framework for this study is grounded in distance education theory and public policy frameworks. Additionally, the literature regarding distance education policy informed the study.

Distance Education Theories

Several theories of distance education have been proposed and have been classified into three groups (Keegan, 1996):

- Theories of industrialization of teaching
- Theories of independence and autonomy
- Theories of interaction and communication

A brief overview of these categories is presented here; however, theories of distance education are examined in more detail in Chapter 2.

Theories of industrialization of teaching have generally held that management and administration of distance education courses should be centralized (Peters, 2003; Simonson, Smaldino, Albright, & Zvacek, 2003). Theories of independence and autonomy included the *Theory of Transactional Distance* where distance education interactions are conceptualized as *transactions* between teacher and learner (Moore & Kearsley, 2005). Theories of interaction and empathy between faculty and student (Holmberg, 1995; Simonson et al., 2003) indicated a shift in distance education emphasis from institution-centered emphasis to student-centered emphasis (Saba, 2003).

Contemporary theories of distance education suggested a systems view in which distance education systems were seen as a collection of subsystems, including learning, teaching, course design and materials, and management and policy (Moore & Kearsley, 2005). The many modalities available from the World Wide Web influenced contemporary systems approaches to distance education theory, allowing for complex interactions between teacher and students (Anderson, 2004).

Policy Theories

Several theories of the policy process are examined in Chapter 2; however, two policy frameworks were found particularly useful in this study. The *punctuated equilibrium framework* (True, Jones, & Baumgartner, 2007) held—while many policies are developed in an incremental fashion—that some policies are driven by rapid shifts in the environment. The onset of the

Internet may be seen as such a shift (Christensen, Aaron, & Clark, 2001). The *policy diffusion framework* held that successful policies elsewhere may be imported across governmental lines (Berry & Berry, 2007). One thrust of this study was to identify such policy diffusion among the various levels of distance education organizations.

Definition of Terms

The following terms were used in this study.

Asynchronous: communication where interaction between the sender and receiver is not simultaneous (Schlosser & Simonson, 2002).

Asynchronous Learning Network *(*ALN): a form of distance learning in which the teacher and student are separated in both time and space. An ALN uses computer-networking technology for teaching and learning activities (Schlosser & Simonson, 2002).

Broadband: a high-capacity, high-speed Internet connection.

Constructivism (constructionism): the concept that all knowledge is constructed from the interaction of human beings; constructivism holds that all knowledge exists in a social context (Crotty, 1998). Qualitative methods are generally grounded in the constructivist framework (Crotty, 1998; Glesne, 1999).

Correspondence course: oldest form of distance education. Classified as *slow asynchronous* (Matheos & Archer, 2004).

Course management system: computer software that facilitates Web-based distance education (for example, WebCT) (Schlosser & Simonson, 2002).

Distance education: "institution-based formal education where the learning group is separated, and where interactive telecommunications systems are used to connect learners, resources and instructors" (Schlosser & Simonson, 2002, p. 4). Distance education is an all-

inclusive term for educational activities where the teacher and student are separated by a distance.

Distance learning: a term often used interchangeably with *distance education*. Popular in the United States, the term places emphasis on the learner (Schlosser & Simonson, 2002).

Distance learning system: an integrated combination of technologies designed to support teaching and learning when teacher and learner are separated in time and space (Schlosser & Simonson, 2002).

Distributed learning: a newer term that describes a model of education where students and teachers may be collocated for some synchronous activities and separated in space and time for others. The distributed learning concept recognizes the adoption of distance learning technology by traditional institutions in conjunction with classroom-based courses (Schlosser & Simonson, 2002). The concept of distributed learning represents a blending of campus-based and distance education technologies to meet the needs of students (Matheos & Archer, 2004).

Interpretivism*:* See *constructivism* (Glesne, 1999).

Online: interactive computer telecommunications.

Policy: a written plan of action providing guidance to govern behavior in a specific area (Simonson & Bauck, 2003).

Policy analysis: research done to determine the policy adoption process and the effects of adopted policies (Majchrzak, 1984).

Policy research: "process of conducting research or analysis on a fundamental social problem in order to provide policymakers with pragmatic, action-oriented recommendations for alleviating the problem" (Majchrzak, 1984, p. 104).

Program: a "purposeful and organized effort to intervene in an ongoing social process for the purpose of solving a problem or providing a service" (Chen, 1990b, p. 39).

Synchronous: real-time communications in which the sender and receiver communicate at the same time (Schlosser & Simonson, 2002).

Virtual university: an institution that does not have a campus but grants academic degrees (Wolfe & Johnstone, 1999).

Virtual university consortium: accredited academic institutions that are linked online to offer courses with no articulation among consortium members (Epper & Garn, 2004; Wolfe & Johnstone, 1999).

Delimitations

The study was limited to community colleges that are Board Members of the League for Innovation in the Community College. The study was also limited to those states having community colleges that are Board Members of the League for Innovation in the Community College. Similarly, state distance education consortia were included that had member institutions that were Board Members of the League for Innovation in the Community College. Consortia were excluded if they were sponsored by entities that crossed state boundaries. Therefore, consortia, such as the Southern Regional Education Board (SREB) Electronic Campus Initiatives, were not included. As detailed in Chapter 3, member institutions of the Board Members of the League for Innovation in the Community College were purposefully selected to homogenize the sample, increasing the likelihood of robust distance education programs. The study was limited to written documents; no human subjects were involved.

Overview of Research Methods

Thirty-seven community colleges and 15 states were included in a purposive sample (Creswell, 2005; Glesne, 1999; Patton, 1990). State documents were examined to determine the

existence of distance education consortia (McCoy & Sorensen, 2003). Where a state consortium was identified, the consortium policies were analyzed using the same qualitative, textual analysis approach (Altheide, 1996; McCullough, 2004) as were used for the state and institutional samples. Many individual community colleges are part of larger community college districts. Within the sample, five districts were identified and these districts provided oversight for 25 of the 37 institutions sampled.

The unit of analysis for the study was "a document" (McCollough, 2004). Whole documents from sample states, consortia, and institutions were gathered in electronic form, coded by state, and stored in spreadsheets. The content of the documents was then analyzed to identify patterns indicating policy diffusion.

Qualitative research techniques grounded in the constructivist epistemology formed the core of the data analysis. Specifically, ethnographic methods of document review and content analysis techniques were used (Altheide, 1996; Creswell, 2005; Hoepfl, 1997; McCollough, 2004). A three-tiered policy analysis framework (King, Nugent, Russell, Eich, & Lacy, 2000) formed the basis for developing a content analysis protocol. Axial coding techniques (Altheide, 1996; Creswell, 2005) facilitated mapping textual elements of the *Interregional Guidelines for Electronically Offered Degree and Certificate Programs* (Middle States Commission on Higher Education, 2002) to the three-tiered policy analysis framework, resulting in the content analysis protocol used to analyze sample document data.

Data reduction from the protocols fit into three factors, which were identical to the tiers from the policy analysis framework: management and organization, faculty, and students. The levels of analysis were state, consortia, and institutional policies.

Organization of the Study

The remainder of this study is organized into four chapters. Chapter 2 examines a review of the relevant literature on distance education theory and practice, policy theory, and distance education policy. Chapter 3 offers a more in-depth review of the research methodology. Chapter 4 presents a detailed analysis of data and findings. Chapter 5 includes conclusions, implications and the summary, as well as recommendations for future research.

CHAPTER 2
REVIEW OF LITERATURE

Introduction and Purpose

The purpose of the study was to conduct a normative analysis of policy on technology-mediated distance education in community colleges at state, consortia, and institutional levels to understand the diffusion of policy concepts in this increasingly central medium. To accomplish the normative analysis, the study compared policy directives and program attributes at the state, consortia, and institutional levels to factors derived from policy analysis frameworks (PAF). The goal of the study was to determine the degree of diffusion of policy across the levels. Policy and program attributes were also compared to acknowledged best practices.

The literature of distance education and policy-related fields informed the study. The history and relevant theories of distance education served to set the scene and provide the underlying conceptual basis for the policy analysis. Similarly, the study's concepts and evaluation of public policy were instructive in conducting policy research and analysis. Policy theory and policy analysis practice guided the study. Finally, available distance education policy literature informed the study and served to synthesize theory and practice into the selected policy analysis framework. The literature for each of these areas is reviewed below.

A Brief History of Distance Education

While historians have largely ignored it, distance education has a rich and varied history (Pittman, 2003). The format for distance education has experienced five generations (Moore & Kearsley, 2005). These generations include correspondence, broadcast radio and television, open universities, teleconferencing, and Internet/Web-mediated online education. This section is divided into subheadings along these generational lines. The final subsection visits anticipated

developments and the controversies wrought by rapid change in the distance education environment.

Correspondence Study

Correspondence study was the first distance education format, and for nearly 120 years it was the sole method of distance education (Pittman, 2003). Correspondence courses date from the introduction in Great Britain of the penny post in 1840 (Simonson, Smaldino et al., 2003; Simpson, 2002). The mail was reliable and the cost of postage to any location in the British Empire was a penny. This development fostered correspondence education in shorthand (Moore & Kearsley, 2005). France and Germany also had correspondence study courses during the same period, using the postal service as a communications medium (Moore & Kearsley, 2005). In 1881, the state of New York authorized the Chautauqua College of Liberal Arts to award academic degrees to students who completed prescribed residence and correspondence study (Simonson et al., 2003). Professor William Rainey Harper of Yale University headed the Chautauqua program. Later, as president of the University of Chicago, Harper created a correspondence institute to deliver university courses via the mail (Moore & Kearsley, 2005; Simonson et al., 2003).

Industry was also involved in correspondence study. In 1890, courses were offered in mining methods and safety. The organization that initially offered such courses developed into the International Correspondence Schools (ICS) whose enrollment grew to more than 2 million by 1920 (Simonson et al., 2003). During that same period, some 150 railroad companies offered distance education courses. In Sweden, H. S. Hermod founded a school of the same name teaching English by correspondence (Simonson et al., 2003).

By 1930, correspondence courses were offered at 39 universities in the United States (Moore & Kearsley, 1996), with many extension institutes serving as for-profit arms of an

otherwise nonprofit, post-secondary institution (Pittman, 2003). Estimates of enrollment in correspondence courses indicate that approximately 2 million students were engaged in study in 1930, and that number had risen to approximately 3 million by 1968 (Moore & Kearsley, 2005). By the late 1920s, concerns resulting from activities of unscrupulous organizations, which had tainted correspondence study, led to the founding of the National Home Study Council (NHSC) (Moore & Kearsley, 2005). The NHSC was founded in 1926 to assure quality in correspondence education (Moore & Kearsley, 2005). Correspondence study continues today through several institutions, including the University of Wyoming, the University of Florida, and Texas State University.

Radio and Television Broadcasting

The advent of the reliable radio in the mid-1920s interested educators, but radio proved a daunting medium for education (Moore & Kearsley, 2005). Of 176 radio stations established at educational institutions, few survived the 1920s (Simonson et al., 2003). Television was somewhat more successful with the creation of the Corporation for Public Broadcasting in 1967, as well as several state-run educational television entities, notably in Iowa and Alaska (Moore & Kearsley, 2005; Simonson et al., 2003). Ultimately, this generation of distance education formats reached more than 1,000 higher education institutions and some 600,000 students by the early 1980s and produced successful telecourses (Moore & Kearsley, 2005). While this effort was successful, the history of broadcast education is not well documented (Pittman, 2003).

Open Universities

In the United States, the Articulated Instructional Media (AIM) Project operated from 1964 to 1967. The project tested the idea of joining multiple communications technologies to offer education to distant students (Moore & Kearsley, 2005). It was the first test of distance education as a *whole system* (Moore & Kearsley, 2005). The AIM Project suffered from control problems

because there was no control over faculty and curriculum, no control over funds, and no control over credit or degrees awarded (Moore & Kearsley, 2005). The Open University of the United Kingdom was founded in 1971 (Simonson et al., 2003). The Open University was a degree-granting institution that offered complete programs via distance. The Open University avoided the control flaws of the AIM Project (Moore & Kearsley, 2005; Simonson et al., 2003). Where the AIM Project was challenged, the Open University has been a success with annual enrollment of more than 200,000 students (Moore & Kearsley, 2005).

The AIM Project and the Open University of the United Kingdom concept were examples of a whole system theory in which television broadcasts and correspondence instruction were integrated (Moore & Kearsley, 2005). Since the advent of the Open University of the United Kingdom, many other large successful teaching universities have opened, primarily in Asia (Moore & Kearsley, 2005). In the United States, distance-teaching universities, such as Nova Southeastern University and the University of Phoenix, have been successful in similar fashion to the Open University of the United Kingdom (Simonson et al., 2003).

Teleconferencing

In the 1980s fully synchronous distance education resulting from vastly improved communications systems, satellite, and fiber-optic communications moved teleconferencing to a level that allowed true collaboration among students and faculty (Simonson et al., 2003). The early equipment was expensive and institutions formed consortia to reduce the cost (Moore & Kearsley, 2005). Featuring synchronous, real-time, two-way communications, coupled with computers and the Internet, this medium continues in operation today (Simonson et al., 2003).

Internet/Web-mediated Online Education

While video conferencing became more cost-effective by the advent of the Internet and high-speed connections, the Internet also ushered in Web-based education which has become the

most widely used distance education approach (Moore & Kearsley, 2005). The technology of the World Wide Web (WWW) appeared in 1990 as an offshoot of the 1989 development by Tim Berners-Lee of Hypertext Markup Language (HTML) (Keep, McLaughlin, & Parmar, 2000). The WWW marked a major change in the usefulness of the Internet, affecting the way many Americans—and increasingly other nationals—see the world and communicate with one another. The WWW has also resulted in a paradigm shift in higher education (Duderstadt, 2000; Moore & Kearsley, 2005).

Approximately 3.2 million degree-seeking, post-secondary students were taking one or more online courses in the fall of 2005 (Allen & Seaman, 2006). This number represented an increase of more than 800,000 from the previous year. While this one-year increase is more than double the increase of any prior year (Allen & Seaman, 2006), the growth since 2002 has been equally remarkable. The fall 2002 enrollment of students taking at least one online course was 1,602,970 (Allen & Seaman, 2005). The same statistics for the fall 2003 and fall 2004 enrollments were 1,971,397 and 2,329,783, respectively. Distance education therefore has grown at an annual rate of more than 18% from 2002 to 2006 (Allen & Seaman, 2006). By contrast, total undergraduate enrollments for all degree-granting institutions during the same period moved upward at a slower pace, increasing from 14.2 million to 14.9 million students or 4.9% (National Center for Education Statistics, 2006). The great majority of distance education students are engaged in asynchronous, online courses (Allen & Seaman, 2006).

Controversies and Critiques

Distance education has been criticized since its inception (Pittman, 2003). As noted earlier, low standards in correspondence courses led to the founding of the National Home Study Council in 1926 (Moore & Kearsley, 2005). Online technology-mediated distance education is rapidly becoming a ubiquitous feature of post-secondary institutions, and this transition is not

without controversy (Saba, 2005). Disruption in markets has been observed to be a powerful tool for change and has generated resistance among market leaders (Christensen et al., 2001). In addition, institutions such as the University of Phoenix have disrupted the fabric of higher education by targeting an underserved, overlooked market of information-hungry adults who use the Internet (Christensen et al., 2001). Virtual universities and consortia that have focused on increasing access to higher education have been observed to be more successful than those that have focused on fiscal justifications for their existence (McCoy & Sorensen, 2003).

Three developments occurred in the closing years of the 20th century that increased interest in distance education: advent of mature information technology and the World Wide Web; the end of the Cold War; and financial challenges to states (Saba, 2005). As a result of these factors, many of the aspects of traditional higher education—location, roles, time allocation—will be challenged in the 21st century (O'Banion, 1997). While learning remains the central focus for the shifting roles of colleges, the delivery mode for that learning will be a powerful shape-shifter as well (O'Banion, 1997). The convergence of economics and technology will drive more interest in distance education (O'Banion, 1997; Saba, 2005).

Students as consumers are demanding more flexibility and ease of educational access, and these demands have increased the use of technology-driven applications—a euphemism for online education (Levin, 2001). Knowledgeable higher education leaders have remarked upon the shift of universities into the marketplace, and they commented upon the requirement for higher education institutions to serve the needs of students in innovative, responsive ways (Bok, 2003; Duderstadt, 2000). Therefore, online education and a rapidly shifting technological landscape are undeniable features of the current and future post-secondary education arena.

In contrast, while several studies have indicated value in online education (Lou, Bernard, & Abrami, 2006), faculty members saw little value in deviating from traditional delivery methods (Allen & Seaman, 2006; Levin, 2001). Disruptive innovation enters the market at a low level of performance and customer acceptance, and it is usually disdained by the market leaders (Christensen et al., 2001). Faculty disdain for online education was well documented (Allen & Seaman, 2006; Pittman, 2003), but a distain is not new. Thorstein Veblen and Abraham Flexner were early 20th century critics of correspondence study (Pittman, 2003). The critics of distance education usually are "unburdened with empirical evidence" (Pittman in Moore & Kearsley, 2005, p. 44). Several researchers have observed that the clash of cultures within academia is based upon conflicting value structures that reflect the functional views of faculty, administrators, and technology managers (Bergquist, 1992; Birnbaum, 1988; Saba, 2005). Saba (2005) stated that faculty exist in a premodern *craft* culture focused on freedom and autonomy; administrators inhabit a modern culture demanding efficiency and cost-consciousness; and distance education occupies a post-modern information technology culture.

Some faculty criticisms were focused upon the cost-reduction attributes of online education. The faculty members claimed that they were oppressed by alliances between the institutions and the technology industry (Pittman, 2003). Still other skeptics have been concerned with the reduction of academic freedom driven by industrial models of asynchronous learning (Pittman, 2003). Finally, faculty members were concerned that working conditions might be affected as the shift in teaching roles continued to play out (Pittman, 2003). Faculty members attacked correspondence study with a vengeance with the onset of the Great Depression, so attacks upon the quality of distance education will likely increase as budgets diminish and expenses at traditional institutions rise (Pittman in Moore & Kearsley, 2005). A major impetus

for this study is to assess the state of policy regarding online learning so that quality concerns might be addressed.

Theories of Distance Education

Distance education theory informed the study. The approach to distance education in the United States has been highly pragmatic with distance educators, using the prevailing media of the time to accomplish educational goals (Pittman, 2003; Saba, 2003). Despite the pragmatic approach, some theories have arisen from both international sources as well as American scholars (Gunawardena & McIsaac, 2004; Simonson et al., 2003). *Best practices* have emerged and have been translated into conceptual building blocks that are currently being assembled into new theories (Anderson, 2004; Saba, 2003). However, one scholar suggested that Web-based instruction is a technological enhancement to distance education and did not introduce new pedagogy (Jung, 2001).

Holmberg (1995) explained that theory is "a systematic ordering of ideas about the phenomenon of our field of inquiry and an overarching logical structure of reasoned suppositions which can generate intersubjectively testable hypothesis" (p. 4). Several theories of distance education have been proposed and have been classified into three groups (Keegan, 1996):

- Theories of industrialization of teaching
- Theories of independence and autonomy
- Theories of interaction and communication

This portion of the review of literature examines leading theories of distance education using Keegan's (1996) three groups as a guide. A final section discusses linkages between distance education theory and policy analysis frameworks (PAF) for distance education.

Theories of Industrialization of Teaching

Theories of distance education prior to the introduction of the World Wide Web were focused on defining distance education and on aspects of course delivery. In 1967, Otto Peters

proposed a theory of industrialization that relied upon industrial-age organization, planning, division of labor, mass production, and formalization to distribute educational materials to large numbers of students (Gunawardena & McIsaac, 2004; Moore & Kearsley, 2005; Simonson et al., 2003). Peters's theory envisioned a structured system with limited grounding in social science (Simonson et al., 2003). It was a theory of organization rather than of pedagogy (Gunawardena & McIsaac, 2004). Peters's theory supported large numbers of widely separated distance education students (Simonson et al., 2003). It was a highly influential theory and helped shape the concepts of distance education (Gunawardena & McIsaac, 2004). In recent years, Peters (2003) commented on the significant paradigm shift in distance education wrought by the new media. Peters maintained, however, that students in distance education remained largely autonomous, self-directed learners.

The *Industrial Theory of Distance Education* proposed by Peters (Simonson et al., 2003) stated

- Planning and organization are critical to success.
- Course development is important.
- Courses must be formalized and expectations of students standardized.
- Teaching is objectified.
- Distance education can be economically feasible only with centralized administration.

Under theories of industrialization, distance education was best administered centrally with concentration of resources (Simonson et al., 2003).

Keegan's theory, first proposed in 1980, saw distance education as having six key elements (Gunawardena & McIsaac, 2004; Holmberg, 2003; Keegan, 1996; Simonson et al, 2003):

- Quasi-permanent separation of teacher and learner
- Influence of an educational organization
- Use of media to link teacher and learner and to carry course content
- Two-way communication
- Quasi-permanent absence of a learning group
- Industrialized education

Keegan's (1996) definition of distance education remained accurate with the exception that learning groups were made possible using electronic communications (Holmberg, 2003).

Keegan (1996) added to his theories by hypothesizing that distance education was indeed a form of education, but that success required teaching and learning to be integrated rather than existing in separate place and time (Simonson et al., 2003). Keegan additionally hypothesized that without integrated teaching and learning, students would drop out and experience educational quality deficits, and the status of distance learning would be questioned (Simonson et al., 2003).

Theories of Independence and Autonomy

In the 1960s, Charles Wedemeyer developed a theory of learner-centered distance education which influenced Michael G. Moore (Gunawardena & McIsaac, 2004). In 1972, Moore introduced the *Theory of Independent Study* (Moore & Kearsley, 2005). The theory was a pedagogical approach whereby teachers were required to plan and interact (Moore & Kearsley, 2005; Simonson et al., 2003). Distance education theory—from the viewpoint of the individual faculty member—was opposed to industrial theories of distance education where lessons were largely created by central planners (Simonson et al., 2003). Moore classified distance education as autonomous (determined by the learner) or nonautonomous (determined by the teacher) (Simonson et al., 2003). The theory gauged autonomy by whether the teacher or the learner determined learning objectives, teaching resources, and methods of evaluation (Simonson et al., 2003).

Moore elaborated on the theory throughout the 1980s and early 1990s, leading to the development of the *Theory of Transactional Distance*. In the Theory of Transactional Distance, distance education interactions were conceptualized as *transactions* between teacher and learner (Moore & Kearsley, 2005). The distance was seen as a continuum of more or less transactional

separation between faculty and student (Moore & Kearsley, 2005). Drawing on earlier constructs, learner autonomy was a key variable in determining transactional distance in Moore's theory (Gunawardena & McIsaac, 2004). In more autonomous distance education settings, learners took more responsibility for their own learning (Gunawardena & McIsaac, 2004; Simonson et al., 2003). Therefore, Moore's theory was based in social science versus earlier distance education theories that were grounded in industrial models focused on organizational structure.

Theories of Interaction and Communication

The Theory of Transactional Distance blended both industrial and psychosocial constructs in that it measured transactions along dimensions of dialogue and structure (Moore & Kearsley, 2005). One environmental factor for dialogue was the existence and size of the learning group, a departure from earlier (industrial) theories that suggested that learning groups were incompatible with distance education (Gunawardena & McIsaac, 2004; Moore & Kearsley, 2005; Simonson et al., 2003). Interpersonal variables included educational philosophy, personalities of teacher and student, subject matter, and environment (Moore & Kearsley, 2005). Structure referred to the design of the course and the educational philosophy of the teaching organization (Moore & Kearsley, 2005).

These various transactions led Moore to postulate a variety of interactions in the distance education environment (Gunawardena & McIsaac, 2004; Moore & Kearsley, 2005; Simonson et al., 2003). Specifically, the Theory of Transactional Distance suggested that three interactions existed (Gunawardena & McIsaac, 2004; Moore & Kearsley, 2005):

- Teacher-Learner Interactions
- Learner-Content Interactions
- Learner-Learner Interactions

The concepts of transactions between and among the various elements—teachers, learners, content, context, and organization—served to define a distance education system (Gunawardena & McIsaac, 2004; Saba, 2003, 2005; Shaffer, 2005). Systems approaches to distance education theory will be addressed in the next section.

Holmberg (1995) developed the *Theory of Interaction and Communication* in 1986, which suggested that interaction between teacher and student is the core to distance teaching (Simonson et al., 2003). This interaction required emotional involvement with the material and a personal relationship between student and instructor which, in turn, created learning pleasure and student motivation (Simonson et al., 2003).

Holmberg (2003) expanded his theory to include more concepts of support and interaction in *A Theory of Distance Education Based on Empathy*. These concepts included the following:

- Distance education serves learners who are not able to use or who do not want to use face-to-face teaching.
- Support from an organization, administration of teaching and learning process, and empathy with students are required elements.
- Distance education is supported by noncontiguous means, for example, pre-produced course materials.
- Mediated communications are required, including friendly interaction between students, tutors, counselors, and other staff.
- The teaching and learning process includes arrangements for student-student interaction facilitating personal relationships, study pleasure, and empathy for students.
- Quick turnaround of assignments and other communications are also required.

Holmberg (2003) envisioned "guided didactic conversations" (Gunawardena & McIsaac, 2004, p. 360) as a feature of the empathy approach. He also focused upon the importance of dialogue.

The industrial theories of Peters (2003) and Keegan (1996) were more organization-centered, focusing on structural issues, while the theories of interaction of Moore and Holmberg

are focused on the individual and were more learner-centered (Holmberg, 2003; Moore & Kearsley, 1996, 2005; Saba, 2003). The complexity in the interface of these two areas gave rise to the contemporary search for a systems-oriented theory of distance education (Saba, 2003, 2005).

Contemporary Theoretical Concepts in Distance Education

As mentioned earlier, Moore (Moore & Kearsley, 1996, 2005) and Holmberg (1995, 2003) adopted learner-centered views of distance education and cast the concept in terms of social science (Saba, 2003). The social construction of knowledge has been prominent in educational literature and has been seen as important to distance education (Gunawardena & McIsaac, 2004; Saba, 2003; Shaffer, 2005). Social science has been increasingly seen as operating in the realm of systems and complexity (Gharajedaghi, 2006). Distance education facilitated by the Internet was now seen as an emerging post-industrial form of education (Saba, 2003). Therefore, a systems view of distance education became a contemporary interpretation of the field.

A system is defined as a group of elements that are organized and arranged so that the elements can act in concert toward a desired outcome (Kerzner, 2003). Elements of input, process, output, and a feedback loop complete the basic system model (Scholtes, 1998). Feedback (communication) is elemental to the functioning of a system (Scholtes, 1998).

Moore adopted a systems view of distance education in 1996 (Moore & Kearsley, 1996, 2005). He observed that a distance education system consists of several subsystems and their processes: learning, teaching communications, course design and materials, and management, including organization, and—significantly for this study—policy (Moore & Kearsley, 2005). Each of these elements was a component of the whole, and while each subsystem was individually worthy of close analysis, understanding the interrelationships among the component elements was paramount (Moore & Kearsley, 2005). Distance education organization structures

manifested the systems characteristics of complexity, hierarchy, dynamism, self-organization, and chaos (Saba, 2003). Distance education scholars have called for a *Systems Theory of Distance Education* (Shaffer, 2005). Systems dynamics approaches have been applied to the Theory of Transactional Distance interactions posited by Moore (Moore & Kearsley, 2005; Saba, 2003). These approaches examine the feedback loops in the systems model, and they have been viewed as good modeling tools for distance education (Shaffer, 2005). For example, the feedback loop between Moore's concepts of dialogue and structure indicates a continuum of transactional distance (Saba, 2003). Researchers have suggested that additional feedback loops are possible that would model other constructs within distance education systems (Saba, 2003; Shaffer, 2005).

Anderson (2004) proposed a contemporary systems model of distance education that accommodates the increase in communications and complexity found in online learning. In addition to recognizing the sociocultural factors in how people learn, the model also accommodated the many modalities of interaction available from the Web (Anderson, 2004). The systems model expanded beyond the Transactional Theory of Distance interactions between student-teacher, student-student, and student-content to include more complex interactions between teacher and content, between content and content, and between teacher and teacher (Anderson, 2004). The model also included an equivalency theorem that allows substitution of one form of interaction for another, as long as one of the three interactions is at a very high level (Anderson, 2004). Anderson's (2004) model was not a formal theory, but distance education scholars have called for models that similarly reflect the complexity and communications modalities afforded by the Internet (Shaffer, 2005).

Public Policy Research and Analysis

Origins of Policy

A policy is a written plan of action providing guidance to govern behavior in a specific area (Simonson & Bauck, 2003). The etymology of the term *policy* is found in ancient Greek, Sanskrit, and Latin words that all mean *city* or *state* (Dunn, 1994). Similarly, *politics* was derived from the Latin *politia* (state); therefore, in many modern languages, the terms *policy* and *politics* are interchangeable (Dunn, 1994). Studies of public administration, political science, and the policy sciences (for example, economic policy, education policy) have been beset with ambiguity resulting from the blurring of meaning of the terms *politics* and *policy* (Dunn, 1994).

The study of policy is as ancient as the Babylonian Code of Hammurabi. Written in the 21st century BCE, the Hammurabian Code was the earliest known effort to create written public policy (Dunn, 1994; Safriz, Layne, & Borick, 2005). The need to codify government response to environmental factors (for example, crop conditions, economic considerations, international strategy, and conflict with other states) gave rise to specialists educated in governmental management and policy creation (Dunn, 1994). As society became more complex, more division of labor was required. This decision resulted in the evolution of a class of professional politicians (Dunn, 1994). Niccolo Machiavelli's writing of *The Prince*, a treatise on managing affairs of state published in 1532, captured the science of politics, as it existed at the dawn of the 16th century (Machiavelli, 1532/1998). Machiavellian concepts still have value today in predicting human behavior in political circumstances (Kocis, 1998). The Renaissance and the Age of Reason ushered in concepts of scientific empiricism and set the stage for modern policy analysis (Dunn, 1994).

Post-industrial society created a much more complex environment for policy (Dunn, 1994; Hird, 2005). By the 1950s, advances in social sciences had added values and ethics as core

elements of policy science in modern industrial societies (Dunn, 1994). The rise of technical knowledge and intellectual technologies, the proliferation of graduate schools of public affairs and policy studies, and a transformation of the United States from a manufacturing economy to a service and knowledge economy all aligned to boost interest in policy studies and policy analysis (Dunn, 1994; Hird, 2005). Therefore, policy studies and analysis have been increasingly important in providing information to decision-makers as they confront complex, modern problems across a spectrum of public goods and services, including higher education (Hird, 2005; Majchrzak, 1984).

The Policy Cycle and Policy Research

The study of the policy cycle included *policy formulation, policy implementation, and policy accountability* (Rist, 1995). In the first stage of the cycle, policies were formulated as instructions to implementers in response to a need expressed as a societal or organizational goal (Nagel, 1990; Rist, 1995). Then, policies were translated into programs, procedures, or regulations as part of the policy implementation process (Nagle, 1990; Rist, 1995). The third stage in the policy cycle was policy accountability wherein measures of success were applied to determine the effectiveness of the programs, procedures, or regulations stemming from the policy (Rist, 1995).

In response to the complexity of post-industrial society, policymakers and other stakeholders, such as the news media, have become interested in research upon which to ground policy formulation and implementation (Hird, 2005). As a result, four types of research have been seen as useful in assessing social problems (Majchrzak, 1984). *Basic social research* and *technical social research* have been useful in informing policymakers but were not focused on problem-solving (Majchrzak, 1984). The remaining two types of research are *policy analysis* and *policy research* (Majchrzak, 1984; Weimer & Vining, 2005). Policy research has been

focused on examining a particular social problem and identifying alternative solutions to that problem (Majchrzak, 1984; Weimer & Vining, 2005).

Policy Analysis and Evaluation

Policy analysis was focused on identifying relationships among variables describing social issues and selecting variables that could be manipulated to achieve societal goals (Majchrzak, 1984; Weimer & Vining, 2005). Policy analysis may be either quantitative or qualitative (Nagle, 2001a). While both policy analysis and policy research were useful in the policy formulation phase of the policy cycle, policy analysis has also been associated with the process of policy adoption and measuring the success of the policies once adopted (Majchrzak, 1984). Policy analysis included both policy evaluation and policy recommendations (Dunn, 1994). Therefore, policy analysis and program evaluation are closely aligned and make use of many of the same research techniques to reach conclusions regarding public policy (Hird, 2005).

Program Evaluation has been a practical research activity whose major purpose is to provide feedback on policy success through program analysis (Chen, 1990b). Since programs are policy implementation vehicles (Mayer & Greenwood, 1980; Nagle, 1990, 2001a; Rist, 1995), evaluating a program has the effect of evaluating its underlying policy. Measures of success may be normative (a policy program is in place) or causative—actual program outcomes are measured to gauge success of the policy (Chen, 1990a; Chen & Rossi, 1992). Evaluators of policy success may create a theory of the implementation program that is designed to reflect the goals and intent of the policymakers who created the program (Chen, 1990a). Therefore, evaluating a program's normative or causative status has been seen as also assessing policy utility (Chen & Rossi, 1992; Majchrzak, 1984; Nagle, 2001a, 2001b).

Policy Theories

Against the backdrop of empiricism in policy studies, such as increased interest in humanistic factors associated with policy decisions and the expanded complex arena of government, more interest has arisen in public policy theory (Hird, 2005). The Policy Studies Organization (PSO) reported in 2004 that theory development in policy is under way, but no overarching theory of policy formulation exists (Morcol, Rundquist, Reese, & Krone, 2004). The study of policy theory has been undertaken at three levels: frameworks, theories, and models (Ostrom, 2007). A *framework* identifies universal elements of policy analysis and organizes the elements and their relationships with one another. Frameworks are the most general of the three theoretical levels (Ostrom, 2007). A *theory* focuses on the framework and enables the analyst to diagnose phenomena, analyze and explain processes, and predict outcomes of manipulation of variables. Theories are more specific than frameworks (Ostrom, 2007). *Models* are the most specific of the three constructs, and they enable the analyst to make precise assumptions about the variables in a given situation and make narrow predictions about likely outcomes if they are tailored to fit the situation (Ostrom, 2007). Since few fully developed theories of policy have emerged, frameworks are the most common constructs in contemporary policy theory (Morcol et al., 2004; Ostrom, 2007; Sabatier, 2007).

Contemporary theoretical policy frameworks (Morcol et al., 2004; Ostrom, 2007; Sabatier, 2007) include the following:

- Incrementalism approach
- Stages heuristic
- Multiple-streams framework
- Punctuated-equilibrium framework
- The policy diffusion framework
- Policy networks framework
- Social construction framework

- Institutional rational choice (IRC)
- The advocacy coalition framework

The *incrementalism* approach to policy formulation and analysis, proposed by Charles Lindblom in 1959, still has supporters (Gill & Saunders, 1992b; Morcol et al., 2004). The concept of incrementalism maintained that policymakers largely limit themselves to "successive limited comparisons" (Lindblom, 1959, p. 84) of incremental or marginal differences in policy. The incremental approach to policy formulation was one of "muddling through," a trial-and-error methodology (Lindblom, 1959). In presenting this approach, Lindblom observed that incrementalism engendered a practice of ignoring possible adverse outcomes of the resulting policy (1959). However, to disjointed incrementalists, a final policy was not final at all, thus allowing redress of unintended consequences (Lindblom, 1979). Incrementalism was still a viable policy analysis concept since it allowed study and adjustment of portions of a larger system that may otherwise be inaccessible (DeLeon, 1999).

The *stages heuristic* asserted that policy development moves through a series of stages: agenda setting; policy formulation and legitimation; implementation; and evaluation (Majchrzak, 1984). The stages heuristic was not a causal theory, and has been largely overcome by other frameworks (Sabatier, 2007). However, the stages heuristic provided a useful, descriptive, textbook approach to the policy life cycle (DeLeon, 1999; Majchrzak, 1984).

The *multiple streams framework* suggested that policy agenda setting and alternative specification under conditions of ambiguity were influenced by three streams in the system. These three streams were problems, policies, and politics (Zahariadis, 2007). Policymaking is accomplished within the context of a social problem (Majchrzak, 1984; Nagle, 1990). Within the multiple streams framework problems were descriptions of conditions highlighted by indicators (measures such as graduation rates), dramatic events (a bridge collapse), or feedback from

existing programs, for example, testimony by administrators (Zahariadis, 2007). Problem conditions converged with the other two streams: policies and the political mechanisms necessary to adopt the policies. Therefore, clarity and understanding of the issues driving a need for policy were important in problem definition for policymaking (Majchrzak, 1984).

The *punctuated equilibrium framework* considered both stasis (equilibrium) and discontinuous change (disequilibrium) in the policy arena (True, Jones, & Baumgartner, 2007). The framework held that most policies are stable and change incrementally, as described by the incrementalism framework (Gill & Saunders, 1992b; Lindblom, 1959). Some policies, however, represent rapid, discontinuous shifts as a result of political conflict and new agenda setting (True et al., 2007). Rapid shifts may be caused by both large and small changes in the environment (True et al., 2007). A large budget change was one example of the change factors that may drive sudden (punctuated) equilibrium shifts (Sabatier, 2007).

The *policy diffusion framework* explained the adoption of similar policies across several states, for example a state lottery (Sabatier, 2007). The policy diffusion framework described processes through which governments adopt new programs. The diffusion framework was grounded in three concepts: states learn from one another; states compete with each other; and citizens and other interested parties press policymakers to adopt effective policies from other states (Berry & Berry, 2007).

Underlying models for diffusion at national and regional levels have sought to explain how differing policies are transmitted (Berry & Berry, 2007). The policy diffusion framework maintained that every governmental program has its initial source in a nonincremental innovation (Berry & Berry, 2007). Another state may later voluntarily adopt the same policy as an innovation (Berry & Berry, 2007; King & Mori, 2007). Therefore, *policy innovation* is not

necessarily the same as innovation in a product development sense—it has been common for states to adopt policies from one another and call such adoption an innovation (Berry & Berry, 2007). The innovation in this case would be better referred to as *policy transfer* from another jurisdiction (Berry & Berry, 2007; King & Mori, 2007).

Additionally, policy diffusion may be constrained by political agendas and ideologies with different states arriving at differing polices (King & Mori, 2007). One impetus for policy transfer has been the emergence of a new problem that was solved elsewhere (King & Mori, 2007). Politicians must respond to expectations and ideology of the electorate (King & Mori, 2007). Ultimately, the concept of *policy convergence* represents regional or national adoption of the same policy which may then be seen as "soft law (law that has no binding force)" (King & Mori, 2007, p. 19).

When examining the mechanisms that result in policy convergence, several causal factors were identified. Voluntary transfers of policy from one actor to another may result from problem-solving on the part of the adopter (Dolowitz & Marsh, 1996; Knill, 2005). Coersion or imposition of a policy by an outside actor (for example, a state legislature) is another common mechanism for policy adoption (Dolowitz & Marsh, 1996; Knill, 2005). Emulation of other states or institutions and competition among policy actors have been suggested as mechanisms fostering policy diffusion (Dolowitz & Marsh, 1996; Knill, 2005). Of these mechanisms, coercion was the approach with the most rapid rate of adoption, while voluntary or optional transfer was the slowest (Rogers, 2003).

Mechanisms of policy diffusion included seven objects of policy transfer (Dolowitz & Marsh, 1996, pp. 349-350):

- Policy goals
- Structure and content

- Policy instruments or administrative techniques
- Institutions
- Ideology
- Ideas, attitudes, and concepts
- Negative lessons

The concept of *policy networks* has held that policymaking takes place in subsystems consisting of many actors, such as interest groups, governmental agencies, and institutional leaders (Adam & Kriesi, 2007; Marsh, 1998). The policy networks framework was rooted in the concept that the various actors are interdependent and exchange resources in creating policy outcomes (Adam & Kriesi, 2007; Marsh, 1998). In the policy networks framework, power relationships, the structure of the network, and types of interaction among the network's actors drive policymaking behavior (Adam & Kriesi, 2007; Marsh, 1998). Policy networks may function as informal governing bodies in that a formal, governmental policy organization may be only one of the many actors in the network (Adam & Kriesi, 2007). In this regard, the policy networks framework has held that contemporary policymaking bodies may be less formal and less centralized with more distribution of power among the actors (Adam & Kriesi, 2007).

The *social construction framework* asserted that policymakers use a policy design approach to account for numerous intervening variables in the policy planning process (Ingram, Schneider, & DeLeon, 2007). Policymakers socially construct target populations to reflect interest groups (target populations) and institutions based upon values held by policymakers (Ingram et al., 2007). Policy designs shape institutions and culture, according to the social construction framework (Ingram et al., 2007). The social construction framework is still evolving; however, it has been used in numerous contemporary studies to explain power relationships, allocation of benefits and burdens, and policy changes (Ingram et al., 2007).

The *institutional rational choice* framework suggested that institutional rules alter the rational behavior of the individuals making decisions (Sabatier, 2007). Despite the multiple definitions of the term *institution* and the invisibility of many aspects of the structure of institutions (Ostrom, 2007), the *institutional analysis and development* (IAD) *framework* has been widely used in the United States to analyze policy (Sabatier, 2007). The IAD framework was organized in terms of the action arena, or the social space in which the participants interact (Ostrom, 2007). The arena included the situation, participants, positions, outcomes, and linkages (Ostrom, 2007). Factors affecting behavior of the participants included rules, structure, and attributes of the community (Ostrom, 2007). The IAD framework linked rules, conditions and community attributes, individual incentives, and the resulting outcomes in the policy arena (Ostrom, 2007). Units and levels of analysis have been seen as critical variables in IAD-related analysis of policy issues (Ostrom, 2007).

The *advocacy coalition framework* (ACF) focused on advocacy coalitions of actors in a variety of institutions (Sabatier, 2007). A major feature of the ACF included selecting the unit of analysis the policy subsystem(s) that make up the entire policy arena (Sabatier & Wiebe, 2007). The policy subsystem consisted of administrative agencies, governmental committees, special interest groups/political action committees, journalists, policy analysts, and other governmental actors (Sabatier & Wiebe, 2007). In the ACF, the belief systems of these *policy elites* have been seen as elemental for *policy learning*—the relatively permanent alterations of thought or behavior—across coalitions. (Sabatier & Wiebe, 2007). When using the ACF for policy analysis, the researcher must remain cognizant of the possibility of the appearance of additional coalitions (Sabatier & Wiebe, 2007).

The policy process has been characterized as complex and interdisciplinary (Majchrzak, 1984; Sabatier, 2007). To understand such a process required theoretical frameworks to simplify it by identifying elements within the process that serve as markers for the observer (Ostrom, 2007; Sabatier, 2007). Scientific theory systematized knowledge by providing a set of "interrelated propositions" (Morcol et al., 2004, para. 5). Policy researchers focused on these several contemporary policy frameworks and then grouped the phenomena observed (Sabatier, 2007). Each of these frameworks appeared to focus on a different aspect of the policy process, arena, or actors. Since there is no single, grand unifying theory for policy analysis, analysts have been required to disaggregate the parts of the policy in question and to select the best fit to one or more of the available frameworks (DeLeon, 1999).

Distance Education Policy

Elements of distance education policy included its purposes, environment, inputs, processes, and outcomes, as well as a policy community consisting of stakeholders, including administrators, faculty, and students (Pacey & Keough, 2003; Perraton, 2003). For higher education, the purposes for distance education have been in extending educational opportunities for new audiences to allow learner convenience or to foster economic development by expanding learning access (Perraton, 2003). Community colleges in particular have been interested in distance education as a means to foster access for continuous learning and for promoting the concept of learning without limitations of place and time (O'Banion, 1997; Tracy-Mumford & Parke, 2000).

The environment for distance education policy has been one of economics, educational access, technology, and cost (Perraton, 2003). Educational access and economics are interrelated in that access to higher education has been seen as fostering national economic development and competitiveness; hence, expenditures for distance education are cast as investments (Perraton,

2003). Technology was an enabling element which provided opportunity to expand access and which merited investment (Perraton, 2003). Finally, cost savings provided to institutions from distance education have been documented and were seen as favoring distance education (Carnevale, 2005; Perraton, 2003; Texas Higher Education Coordinating Board, 2000).

Inputs to distance education policy included the purposes, resources, and stakeholders. Processes included organizational structures, technologies (for example, learning management systems such as WebCT) and governance, accreditation, and quality assurance (Pacey & Keough, 2003; Perraton & Lentell, 2003). Outcomes were benefits to the student, the workforce, employers, and society (Pacey & Keough, 2003; Perraton & Lentell, 2003).

Stakeholders consisted generally of administrators, students, and faculty (Perraton, 2003). Stakeholders, combined with policymakers and other groups and agencies with an interest in distance education policy, made up the policy community (Pacey & Keough, 2003). Students, faculty, and administrators have been considered the targets of distance education policy (Chen, 1990b; Ingram et al., 2007).

These elements were highly coincident with frameworks for distance education policy analysis (Berge, 1998; Gelman-Danley & Fetzner, 1998; King et al., 2000; Levy, 2003; Osika, 2006), as well as quality standards for distance education (Phipps & Merisotis, 2000). The following elements were critical issues in policy and planning for distance education (Lentell, 2003, pp. 252-253):

- Identifying the target population and their needs
- Choosing the type of system
- Choosing the appropriate technology of delivery
- Business planning and costing open and distance learning systems
- Materials—developing or acquiring
- Tutoring and supporting students
- Recruiting and enrolling students
- Assessing students

- Managing and administering the open and distance learning systems
- Monitoring, evaluating, and quality assurance

In relation to other disciplines, such as politics and business, policy analysis in higher education has been a comparatively recent development (Gill & Saunders, 1992a). However, the high value and high impact of higher education in the national context conjoined to make educational policy a critical area of study (Gill & Saunders, 1992a). A wide variety of analytical methods were required to evaluate educational policy since educational institutions had characteristics that are significantly different from business or political institutions (Gill & Saunders, 1992a; Majchrzak,1984). For example, higher education was subject to multiple cultures, such as shared governance, that could influence policymaking behavior and could potentially cause conflict with other parts of the educational subsystem (Bergquist, 1992; Birnbaum, 1988). Therefore, to assure that key elements were examined, analysis of distance education policies required use of a multifaceted framework.

Policy analysis in higher education required understanding the issues, the environment, culture, constraints, policy actors, networks, and coalitions (Bergquist, 1992; Gill & Saunders, 1992b; Pacey & Keough, 2003; Perraton & Lentell, 2003). Some higher education policy analysts were adherents of incrementalism to explain policy (Gill & Saunders, 1992b), while other analysts supported the stages heuristic (Majchrzak, 1984). However, the rapid onset of the Internet and its effect on distance learning suggested a more adaptive approach (Pacey & Keough, 2003). Such an adaptive approach aggregated several policy theory frameworks previously discussed while recognizing that development of policy remained an iterative exercise (Pacey & Keough, 2003). An adaptive approach blended social construction of the target population (students) with the distance education policy system to create desired outcomes.

In the case of online distance education, the policy system consisted of resources, educational content, and activities delivered through a telecommunications medium (Pacey & Keough, 2003). Feedback regarding outcomes was via policy network interaction (Pacey & Keough, 2003). Further aggregation of the various frameworks suggested viewing the rapid adoption of online technologies as an example of punctuated-equilibrium that required institutions and state regulatory agencies to shift to more responsive planning models as the environment flexed (Christensen et al., 2001; Pacey & Keough, 2003). The adaptive view of policy theories, as applied to distance education, was reflective of the systems theory of distance education (Moore & Kearsley, 1996, 2005), and served as backdrop for examination of various policy analysis frameworks.

Distance Education Policy Analysis Frameworks (PAF)

Several frameworks have been proposed for distance education policy analysis. Gelman-Danley and Fetzner (1998, para. 2-3) proposed seven policy development areas for distance learning that included the elements in Table 2-1. These areas formed the basis for several other PAF, as listed in Table 2-2 (Berge, 1998; King et al., 2000; Levy, 2003; Osika, 2006). Additional analyses of the distance education policy arena and quality benchmarks focused on the same factors (Dirr, 2003; Lezberg, 2003; Pacey & Keough, 2003; Phipps & Merisotis, 2000; Sherry, 2003; Simonson & Bauck, 2003).

Areas added in revised PAF included technical and cultural factors (Berge, 1998), vision and plans (Levy, 2003) and community (Osika, 2006). The technical area included systems reliability, connectivity and educational access, and infrastructure elements, including hardware, software, and technical support (Berge, 1998). Cultural factors included resistance to innovation and online education (Berge, 1998). Vision and plans were added as part of the need to assure effective management of organizational change and to foster a more rapid rate of adoption

(Levy, 2003). Vision and plans were also related to the need to plan effectively for a change to the institution's educational delivery system (Levy, 2003) and to gain acceptance among the larger learning community (Osika, 2006). The community factor therefore included stakeholders' interests in the other PAF areas (Osika, 2006).

After piloting the use of a more compact PAF (King, et al., 1999; Nugent, Eich, Mlinek, & Russell, 1999), King, Nugent, Russell, Eich, and Lacy (2000) proposed collapsing the Gelman-Danley and Fetzner (1998) and Berge (1998) models from nine factors to three factors. The resultant "three-tiered PAF" turned into a more condensed, but still powerful, approach (King et al., 2000). The three-tiered PAF's policy factors were management and organization, faculty, and students (King et al., 2000). Management and organization included the subareas of tuition and fees, funding formulas, collaboration among educational organizations, resources, curriculum, and program management (King et al., 2000). The faculty area included rewards, support, learning opportunities, including release time, and it addressed intellectual property (King et al., 2000). The student area retained the elements as found within the larger models (King et al., 2000). The King et al. (2000) Three-Tiered Policy Analysis Framework (Figure 2-1) formed the basis for the analytical framework used in this study.

Distance Education Accreditation Policy and Quality Benchmarks

Accreditation policy

Accreditation policy for distance education also informed the study. The most respected and widely accepted accrediting bodies in the United States were the six regional accreditation associations for higher education (Lezberg, 2003):

- Middle States Association of Colleges and Schools
- New England Association of Schools and Colleges
- North Central Association of Colleges and Schools
- Northwest Association of Schools and Colleges

- Southern Association of Schools and Colleges
- Western Association of Schools and Colleges

Responding to calls from member institutions to provide accreditation policy for technology-mediated distance education, these six regional associations evaluated guidelines for distance-education and adopted those developed by the Western Cooperative for Educational Telecommunications (Middle States Commission on Higher Education, 2002; Lezberg, 2003). Additionally, two community college-oriented associations adopted the *Interregional Guidelines* (Lezberg, 2003). The resultant guidelines are published on the institutions' websites as well as in print form as *Interregional Guidelines for Eelectronically Offered Degree and Certificate Programs* (2nd ed., Middle States Commission on Higher Learning, 2002). The *Interregional Guidelines* (Middle States Commission on Higher Education, 2002) included the following five components:

- Institutional Context and Commitment: Acknowledgement that electronically offered programs are integral to the academic organization.
- Curriculum and Instruction: Critical issues are not technological but curriculum and pedagogy oriented.
- Faculty Support: Faculty roles are changing as technology becomes fully integrated.
- Student Support: The 21st century student is different from his predecessor and these differences affect all aspects of the college student's experience.
- Evaluation and Assessment: Student achievement and overall program performance assessment have taken on additional meaning as technology impacts the institution.

The five components reflected the same general elements of policy as found in the aforementioned PAF.

In addition to utilizing these guidelines, the regional associations adopted the following statements of principle (Middle States Commission on Higher Education, 2002, p. vi):

> While endeavoring to maintain balance and flexibility in the evaluation of new forms of delivery the regional commissions are also resolved to sustain certain values. These include among other things:
>
> - that education is best experienced within a community of learning where competent professionals are actively and cooperatively involved with creating, providing, and improving the instructional program;
> - that learning is dynamic and interactive, regardless of the setting in which it occurs;
> - that instructional programs leading to degrees having integrity are organized around substantive and coherent curricula which define expected learning outcomes;
> - that institutions accept the obligation to address student needs related to, and to provide the resources necessary for, their academic success;
> - that institutions are responsible for the education provided in their name
> - that institutions undertake the assessment and improvement of their quality, giving particular emphasis to student learning;
> - that institutions voluntarily subject themselves to peer review.

The associations further state in the *Interregional Guidelines* (Middle States Commission on Higher Education, 2002, p. vi), "There can be no doubt that there are challenges in sustaining these important values through technologically mediated instruction. The regional commissions appreciate this reality, and also recognize that these values may be expressed in valid new ways as inventive institutions seek to utilize technology to achieve their goals." Finally, the regional accreditation associations, as the primary higher education quality organizations in the United States, each issued policy statements of varying strengths regarding compliance with the guidelines (Lezberg, 2003).

Quality benchmarks

Several authors proposed quality benchmarks for distance education (Phipps & Merisotis, 2000; Sherry, 2003; Simonson & Bauck, 2003). These benchmarks aligned with the same categories, as noted in policy analysis frameworks and accreditation standards (Table 2-3). These

categories were successfully woven into evaluation models for effectiveness of distance education (Baker, 2003; Chapman, 2006).

Summary

The advent of the Internet and high-speed connections ushered in Web-based education, the most widely used distance education approach (Moore & Kearsley, 2005). The World Wide Web (WWW) marked a major change in the usefulness of the Internet and resulted in a paradigm shift in higher education (Duderstadt, 2000; Moore & Kearsley, 2005). A major impetus for this study was to assess the state of policy regarding online learning so that quality concerns might be addressed.

Distance education theory informed the study. Several theories of distance education have been proposed and have been classified into three groups (Keegan, 1996):

- Theories of industrialization of teaching
- Theories of independence and autonomy
- Theories of interaction and communication

Theories of industrialization of teaching were descriptive of the organization rather than of pedagogy (Gunawardena & McIsaac, 2004). The theories of independence and autonomy represented a pedagogical approach whereby teachers were required to plan and interact (Moore & Kearsley, 2005; Simonson et al., 2003). Moore's Theory of Transactional Distance blended both industrial and psychosocial constructs in that it measured transactions along dimensions of dialogue and structure (Moore & Kearsley, 2005). Holmberg theorized that interaction between teacher and student was the core to distance teaching (Holmberg, 1995; Simonson et al., 2003). This interaction required emotional involvement with the material and a personal relationship between student and instructor (Simonson et al., 2003).

Distance education scholars have called for a *Systems Theory of Distance Education* (Shaffer, 2005). Moore observed that a distance education system consisted of several subsystems, and each of these elements is a component of the whole (Moore & Kearsley, 2005). Anderson (2004) proposed a contemporary systems model of distance education that accommodated the increase in communications and complexity found in online learning. In addition to recognizing the sociocultural factors in how people learn, the model also accommodated the many modalities of interaction available from the Web (Anderson, 2004).

Policy theory and policy analysis were core underpinnings of this study. The policy cycle includes *policy formulation, policy implementation,* and *policy accountability* (Rist, 1995). Policy analysis was focused on identifying relationships among variables describing social issues and selecting variables that can be manipulated to achieve societal goals (Majchrzak, 1984; Weimer & Vining, 2005). Policy analysis may be either quantitative or qualitative (Nagle, 2001a) and was also associated with measuring the success of the policies once adopted (Majchrzak, 1984).

The Policy Studies Organization (PSO) reported in 2004 no overarching theory of policy formulation exists (Morcol et al., 2004). Of particular interest to this study were the punctuated-equilibrium framework, the policy diffusion framework, policy networks framework, and the social construction framework (Sabatier, 2007).

The *punctuated equilibrium framework* considered both stasis (equilibrium) and discontinuous change (disequilibrium) in the policy arena (True, Jones, & Baumgartner, 2007). The *policy diffusion framework* explained the adoption of similar policies across several states (Sabatier, 2007). Ultimately, *policy convergence* represented regional or national adoption of the same policy which may then be seen as "soft law (law that has no binding force)" (King & Mori,

2007, p. 19). The concept of *policy networks* held that policymaking takes place in subsystems consisting of many actors, such as interest groups, governmental agencies, and institutional leaders (Adam & Kriesi, 2007; Marsh, 1998). Policy networks have functioned as informal governing bodies in that a formal, governmental policy organization may be only one of the many actors in the network (Adam & Kriesi, 2007). The *social construction framework* suggested that policymakers socially construct target populations to reflect interest groups (target populations) and institutions, based upon values held by policymakers (Ingram et al., 2007).

A wide variety of analytical methods were required to analyze educational policy (Gill & Saunders, 1992a; Majchrzak, 1984). Since no single, grand unifying theory existed for policy analysis, the analyst was required to disaggregate the parts of the policy in question and attempt to select the best fit to one or more of the available frameworks (DeLeon, 1999). To assure that key elements are examined, analysis of distance education policies required use of a multifaceted framework. The rapid onset of the Internet and its effect on distance learning suggested a more adaptive approach to distance education policy analysis (Pacey & Keough, 2003). Such an adaptive approach aggregated several policy theory frameworks previously discussed (Pacey & Keough, 2003).

In the case of online distance education, the policy system consisted of resources, educational content, and activities delivered through a telecommunications medium (Pacey & Keough, 2003). Feedback regarding outcomes was via policy network interaction (Pacey & Keough, 2003). Further aggregation of the various frameworks suggested viewing the rapid adoption of online technologies as an example of punctuated-equilibrium that required institutions and state regulatory agencies to shift to more responsive planning models as the environment flexed (Christensen et al., 2001; Pacey & Keough, 2003). The adaptive view of

policy theories, as applied to distance education, was reflective of the systems theory of distance education (Anderson, 2004; Moore & Kearsley, 1996, 2005) and served as backdrop for examination of various policy analysis frameworks.

Elements of distance education policy include its purposes, environment, inputs, processes, and outcomes as well as a policy community consisting of stakeholders, including administrators, faculty, and students (Pacey & Keough, 2003; Perraton, 2003). These elements were highly coincident with frameworks for distance education policy analysis (Berge, 1998; Gelman-Danley & Fetzner, 1998; King et al., 2000; Levy, 2003; Osika, 2006), as well as quality standards for distance education (Phipps & Merisotis, 2000).

Several frameworks have been proposed for distance education policy analysis. Gelman-Danley and Fetzner (1998, para. 2-3) proposed seven policy development areas for distance learning. These areas formed the basis for several other PAF. King et al. (2000) proposed collapsing prior models from nine factors to three factors. The resultant three-tiered PAF turned into a more condensed, but still powerful, approach (King et al., 2000). The three-tiered PAF's policy factors were management and organization, faculty, and students (King et al., 2000). The King et al. (2000) Three-Tiered Policy Analysis Framework formed the basis for the analytical framework used in this study.

In addition to the convergence of PAF, quality benchmarks and accreditation standards have been developed. Several authors have proposed quality benchmarks for distance education (Phipps & Merisotis, 2000; Sherry 2003; Simonson & Bauck, 2003). These benchmarks aligned with the same categories as noted in PAF, and they represented an additional input to analysis of distance education policy. These categories have been successfully woven into evaluation models for effectiveness of distance education (Baker, 2003; Chapman, 2006). The six regional

accreditation associations for higher education in the United States responded to calls from member institutions to provide accreditation policy for technology-mediated distance education (Lezberg, 2003). The resultant guidelines were published on the institutions' websites, as well as in print form as *Interregional Guidelines for Electronically Offered Degree and Certificate Programs* (2nd ed.) (Middle States Commission on Higher Education, 2002). These guidelines were also highly coincident with the PAF factors, as well as quality factors, and the elements of distance education policy systems. The regional accreditation associations, as the primary higher education quality organizations in the United States, have each issued policy statements of varying strengths regarding compliance with the guidelines (Lezberg, 2003).

The current interest in systems theories of distance education suggested a multifaceted approach to policy analysis for electronically offered courses. Distance education theories and policy theories converged in several online distance education policy analysis frameworks, quality standards for online distance education, and interregional accreditation guidelines. This convergence set the stage for analysis of distance education policy from a systems' perspective.

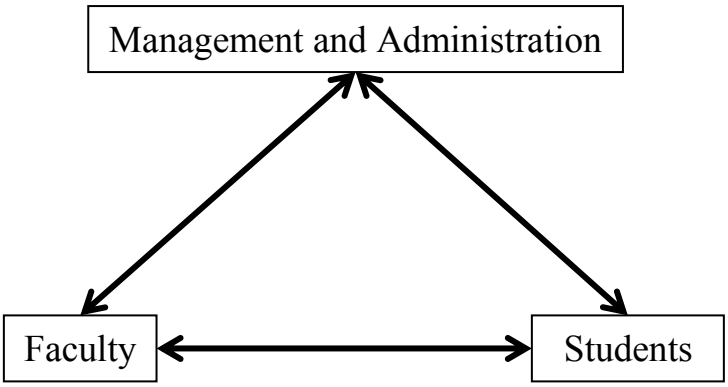

Figure 2-1. Three-tiered policy analysis framework (King et al., 2000).

Table 2-1. Policy development areas for distance learning

PAF Area		Elements
1.	Academic:	Calendar, course integrity, evaluation, admission, curriculum approval, accreditation
2.	Fiscal:	Tuition rate, technology fees, FTEs, consortia contracts, state fiscal regulations
3.	Geographic:	Service area, regional limitations, local versus out-of-state tuition, consortia agreements
4.	Governance:	Single versus multiple board oversight, staffing, existing structure versus shadow colleges or enclaves
5.	Labor-management:	Compensation and workload, development incentives, intellectual property, faculty training, congruence with existing union contracts
6.	Legal:	Fair use, copyright, faculty, student and institutional liability
7.	Student support services:	Advisement, counseling, library access, materials delivery, student training, test proctoring

(Gelman-Danley & Fetzner, 1998)

Table 2-2. Convergence of distance education policy analysis frameworks with quality

Policy analysis frameworks					Quality benchmarks and accreditation guidelines	
Gelman-Danley Fetzner, 1998	Berge, 1998	King et al., 2000	Levy, 2003	Osika, 2006	Phipps & Merisotis, 2000	Interregional guidelines, 2002
Academic	Academic	Management and organization	Curriculum	Program support	Teaching and learning and evaluation and assessment	Institutional context and commitment
Fiscal	Fiscal	Management and organization	Vision and Plans	Program support	Not addressed	Institutional context and commitment
Geographic	Geographic	Management and organization	Vision and Plans	Program support	Not addressed	Institutional context and commitment
Governance	Governance	Management and organization	Vision and Plans	Program support	Course development	Institutional context and commitment
Labor-management	Labor-management	Faculty	Staff training and support	Faculty and program support	Faculty support	Faculty
Legal	Legal	Faculty	Copyright and intellectual property	Content	Not addressed	Faculty support
Student support services	Student support services	Students/ participants	Student services and student training and support	Student support and program support	Student support and course structure	Student support
Not addressed	Technical	Management and organization	Student training support and staff training and support	Technology and course manage-ment system	Institutional support	Institutional context and commitment
Not addressed	Cultural	Management and organization	Vision	Community	Not addressed	Institutional context and commitment

Table 2-3. Distance education quality benchmark categories

Phipps & Merisotis, 2000	Sherry, 2003	Simonson & Bauck, 2003
Institutional support	Institutional guidelines	Fiscal
Course development	Institutional guidelines	Academic
Teaching/learning	Institutional guidelines	Academic
Course structure	Institutional guidelines	Academic
Student support	Student guidelines	Student
Faculty support	Faculty guidelines	Faculty
Evaluation and assessment	Institutional guidelines	Academic Technical Philosophical

CHAPTER 3
METHODOLOGY

Introduction

The purpose of the study was to conduct a normative analysis of policy on technology-mediated distance education in community colleges at state, consortia, and institutional levels to understand the diffusion of policy concepts in this increasingly central medium. The intent was to analyze congruence at each level with factors identified in policy analysis frameworks (PAF) and reflected in distance education's best practices, as adopted by the regional accrediting associations.

This chapter details the assumptions and research rationale for the study to analyze the condition of distance education policy at state, consortium, and institutional levels. This chapter presents research methods and procedures used to conduct the study and describes factors, levels, and data collection protocols. In addition, the chapter provides a detailed explanation of data collection approaches used in selecting samples of state, consortia, and institutional policy documents. Chapter 3 culminates with a discussion of the threats to validity and measures adopted to reduce the impact of these threats.

Assumptions

The study was based on four suppositions regarding distance education policy and document accessibility. First, it is assumed that states, consortia, and individual institutions are interested in distance education policy. States are believed to find value in policy as statements of intent, as well as governance over institutions. Consortia are similarly believed to govern partners' behavior through similar statements of policy and other policy-like guidelines. Institutions are assumed to create governing directives that focus departmental leadership, faculty, staff, and students on expected distance education methods, systems, and outcomes.

Second, following the policy diffusion framework (Berry & Berry, 2007), it is believed that states, consortia, and institutions apply policies in similar ways to achieve similar outcomes. This assumption is grounded upon several distance education policy analysis frameworks converging upon the same core elements, as discussed in Chapter 2 (Table 2-2). Similarly, because institutions are highly focused upon regional accreditation as evidence of quality, it is assumed that the *Interregional Guidelines for Electronically Offered Degree and Certificate Programs* (Middle States Commission on Higher Education, 2002) are important to institutions sampled in this study. In addition, institutions will make strong efforts to meet the various accreditation association guidelines. The *Interregional Guidelines* also converge on the same core elements as distance education policy analysis frameworks, as discussed in Chapter 2 (Table 2-2).

Third, because the *Interregional Guidelines for Electronically Offered Degree and Certificate Programs* (Middle States Commission on Higher Education, 2002) have been adopted across all six regional accreditation associations (Lezberg, 2003), they have the *de facto* status of a national standard (King & Mori, 2007). In applying these standards, institutions are assumed to have a common core approach to distance education.

Fourth, documents regarding policies are assumed to be accessible at all levels of the study, facilitating a rich dataset.

These assumptions lead to the formulation of the following four research questions:

- Are there differences in distance education policies among the regional accrediting bodies, the states, consortia, and institutions?
- To what extent are states' community college distance education policies congruent with frameworks for policy analysis?
- To what extent are states' distance education consortia policies congruent with frameworks for policy analysis?

- To what extent are community college institutional distance education policies congruent with frameworks for policy analysis?

Research Methods

The study relied upon qualitative research methodologies to analyze and reduce data. Qualitative research has been defined as "observing without numbers" and does not include manipulation of variables (Dooley, 2001). The study employed qualitative research methods grounded in constructivism. Ethnographic techniques of document review and content analysis served as data gathering and data analysis approaches (Altheide, 1996; McCollough, 2004).

Qualitative inquiry has been seen as valuable in informing the field about issues in technology education (Hoeplf, 1997). The written documents which formed the dataset for this study did not lend themselves to quantitative analysis, thus qualitative analysis was methodologically appropriate to this study (Hoepfl, 1997; Patton, 1990). In choosing a qualitative approach, the researcher hoped to gain perspective on an area where not much is known about distance education policy and also to fully describe the phenomena associated with it (Hoepfl, 1997). Patton (1990) observed that qualitative data collection consists of three approaches: interview data, direct observation, and review of written documents. Review of documents in this study was the data collection method; content analysis was the data analysis approach (Altheide, 1996; McCollough, 2004). "Document analysis in qualitative inquiry yields excerpts, quotations, or entire passages from organizational, clinical, or program records . . . [and] official publications and reports." (Patton, 1990, p. 10). Since policy documents were not always specific, qualitative analysis techniques allowed creation of an interwoven view of the various policies and resulting institutional guidelines (Patton, 1990).

Documents are "mute evidence" that must be interpreted without benefit of "indigenous commentary" (Hodder, 2000, p. 703). Therefore, the documents in this study stood alone as

artifacts of the policy decisions at state level, among consortia, and at sample institutions. The use of textual analysis was seen as particularly appropriate to policy analysis since concrete, written policies were intended to achieve an end (Hodder, 2000; McCoy & Sorensen, 2003; Weimer & Vining, 2005). Analyzing the content of policy documents was therefore decidedly qualitative.

Weimer and Vining (2005) described policy analysis as "systematic comparison and evaluation of alternatives available to public actors for solving social problems" (p. 26). The present study intended to identify the state of policy for technology-mediated distance education with the intent to inform decision-makers. To accomplish this end, elements of policy research were needed to identify the key elements of the policies and required the "application of a formal methodology to policy-relevant questions" (Weimer & Vining, 2005, p. 26). Document review and content analysis as formal methodologies therefore intersected with policy analysis.

Normative policy analysis was focused on policy and program design to compare actual practice with prescribed practice (Chen, 1990a, 1990b). In order to conduct a normative analysis, a norm must be identified. Distance education policy analysis models have been proposed (Berge, 1998; Gelman-Danley & Fetzner, 1998; King et al., 2000; Levy, 2003; Osika, 2006), and these models have been evaluated in the literature as being useful in analyzing distance education policy (McCoy & Sorensen, 2003; Simonson & Bauck, 2003;). Furthermore, the six regional accrediting bodies in the United States have adopted the *Interregional Guidelines for Electronically Offered Degree and Certificate Programs* (2nd ed.) (Middle States Commission on Higher Education, 2002) as the basis for accrediting technology-mediated distance education programs. The framework proposed by King et al. (2000) was used as a foundation for creating a content analysis protocol by axially coding specific *Interregional Guidelines* statements to

correspond with the key elements of the framework. This content analysis protocol (Table A-1) served as a normative model for the study. Policy documents at state, consortia, and local levels were examined to determine their congruence with the elements of the content analysis protocol.

The specific type of ethnographic content analysis used in the study has been referred to as *qualitative content analysis* (QCA) where the researcher seeks to translate frequency of occurrence of symbols (words/phrases) to objectively compare content (Altheide, 1996). The research goal of QCA is verification versus discovery of new or emerging patterns as in ethnography (Altheide, 1996). In QCA, protocols are constructed to compare research data against operational definitions, reducing issues of reliability by lessening the requirement to continuously apply judgment when coding. This enhances both reliability and validity (Altheide, 1996). As previously discussed, normative policy analysis seeks to compare existing policy statements to desired policy. The QCA and normative policy analysis are thus compatible, with QCA forming the operative approach to the normative analysis.

Research Procedures

Selection of Participating States and Institutions

Sampling strategy for the study included a purposive sample (Creswell, 2005; Glesne, 1999) of the institutional Board Members of the League for Innovation in the Community College. This resulted in a review of documents detailing 37 community colleges' distance education programs. Once the 37 community colleges were selected, their parent states and any state consortial relationships dictated selection of states and consortia for inclusion in the study.

The *typical case approach* to purposive sampling was used (Patton, 1990). The 37 colleges varied in size and were located in 15 states. Furthermore, the institutions sampled covered five of the six regional accreditation bodies in the United States. The sample was purposive because the League Board Members chose to participate in innovation activities at a

higher level than other member colleges (League for Innovation in the Community College, 2004), thus increasing the likelihood of technology-mediated distance education programs in the sample. Since the League for Innovation in the Community College is one of the major proponents of information technology in higher education, League member institutions are exposed to numerous initiatives in technology-mediated distance education (League for Innovation in the Community College, 2004).

Purposive sampling includes identifying documents that can help develop detailed understanding of the phenomenon in question, and in this case, distance education policy attributes at several levels (Creswell, 2005; Glesne, 1999; Patton, 1990). By becoming Board Members of the League for Innovation in the Community College, these institutions have expressed an interest in technology and the advancement of community colleges in an array of innovative approaches to postsecondary education. These institutions thus represent a homogeneous sample that could assist in exploring the conceptual landscape of distance education policy (Creswell, 2005). The Board Members total 37 institutions in 15 states. One Board Member college in the United States was excluded since it was no longer a 2-year institution; a Canadian Board Member college was excluded since the PAF used in this study was derived from *Interregional Guidelines for Electronically Offered Degree and Certificate Programs* (Middle States Commission on Higher Education, 2002), a document accepted for accreditation in the United States.

The use of Board Members served to limit the scope of the study in each state to a few institutions, allowing the study to expand beyond the limits of a single state. Analyzing the condition of distance education policy across 15 states and five of six accrediting bodies enhanced the reliability of the study. In addition, having a sample of 15 states increased the

likelihood of consortium membership for the institutions since distance education consortia are an established feature of the online education landscape (Epper & Garn, 2004).

Sources of Data

Access to primary source documents (McCollough, 2004) was obtained at state, consortium, and institutional level. Documents accessed included state statutes and administrative codes, plans and policy directives of each state's Department of Education, each state director of community colleges, consortial policy statements, and institutional distance education strategic plans, governance policies, and program guidance.

The listing of the League Board Members was readily available on the League for Innovation in the Community College website (http://www.league.org). The documents describing policy for each of the 37 community colleges were generally available on the institutions' websites, which were conveniently accessed through the League for Innovation in the Community College member page (http://membership.league.org/allimembers.html).

State consortia policies were similarly available on consortium websites. State documents included statutes, administrative code, departmental directives, and strategy and financial documents. Statutes and administrative codes were readily accessed via Lexis/Nexis searches and search of state and institutional websites.

Characteristics of the Sample

Overview of the Community College System

Community colleges were selected as the focus for this study because 59.3% of all undergraduate online education students in 2005 were at associates-granting institutions (Allen & Seaman, 2006). According to the American Association of Community Colleges (2007), the United States has 1,202 community colleges. January 2007 enrollment in U.S. community colleges totaled 11.6 million students (American Association of Community Colleges, 2007).

Enrollment Characteristics of Institutions in the Sample

As discussed in Chapter 3, Board Member colleges of the League for Innovation in the Community College were selected as a purposive sample for the study (Table 3-1). Table 3-2 depicts the enrollments at sample institutions and their Carnegie Foundation Classification. With the exception of Delta College, Michigan, all institutions in the sample met requirements for inclusion in the Carnegie Classification *Very Large, Two-year* (VL2). Institutions in this classification had enrollments of at least 10,000 students (Carnegie Foundation for the Advancement of Teaching, 2007). Delta College, with a smaller enrollment of 6,500 students, met the requirements for Carnegie Classification L2 (*Large, Two-year*). Institutions in this classification had enrollments between 5,000 and 9,999 students (Carnegie Foundation for the Advancement of Teaching, 2007). The total 2005 enrollment for the sample institutions was more than 843,000, a figure that represents approximately 7% of community college students.

Community College Districts and Individual Institutions

Of the 37 institutions sampled, 25 were associated with five community college districts. The districts were self-identified as such, and constituent institutions were named as *colleges* versus *campuses*. Individual institutions totaled 12. While some of the individual institutions had multiple campuses and had a larger enrollment than some of the sample districts (Table 3-2), the individual institutions were not classified as *districts*. For the purposes of this study, the institutions under district control were aggregated at district level. Since two-thirds of the institutions in the study were under district control, the researcher concluded that treating them as individual institutions would overstate the influence of district policies on the overall sample. Aggregating at district level resulted in a total of 17 individual institutions or districts in the sample.

Analysis of Research Data

Framework for Analysis

The study focused on the written policy document as the unit of analysis. The three levels of analysis used were state, state consortium, and individual community college. Within states, the sub-levels of analysis were state statutes, state administrative codes, and department of education policy. At the consortium level, written policies and program guidelines were analyzed regarding distance education or distance learning. Within the individual community college, the levels of analysis were written policy and program guidelines.

At all three levels—state, consortium, and individual institution—only written documents were analyzed. The study was therefore limited to document review and content analysis. No human subjects were involved.

Analysis factors

Frameworks for management and policy analysis of distance education courses are discussed in Chapter 2 (Gelman-Danley & Fetzner, 1998; King et al., 2000; Levy, 2003; Osika, 2006). These frameworks suggest several dimensions of analysis corresponding to distance education subsystems (Moore & Kearsley, 2005). The convergence of analytical elements found in various distance education policy analysis frameworks is discussed in Chapter 2. These elements were reduced to three factors of analysis: Management and Organization, Faculty, and Students (King et al., 2000). Table 3-3 depicts factors and levels of analysis adopted for the study.

Data Analysis Protocols

The documentary data were compared against a content analysis protocol, as described in this chapter (Table A-1). The content analysis protocol (McCullough, 2004) was developed based upon the policy analysis framework proposed by King et al. (2000) and the *Interregional*

Guidelines for Electronically Offered Degree and Certificate Programs (Middle States Commission on Higher Education, 2002), as adopted by the six U.S. regional accreditation associations. To accomplish this comparison, the objective content of documents was determined by a serial progression of sampling, data coding, and analysis and interpretation using the policy analysis framework protocol as a guideline (Altheide, 1996). Table A-1 depicts the content analysis protocol for analyzing the content of sample documents.

Documents found at each level were interpreted as having the PAF factor and coded with the numeral "1" or they were determined not to have the PAF factor and excluded. Coding of the PAF factors with a numeral 1 allowed use of spreadsheet functions to calculate total numbers and percentages by factor and level for each of the PAF elements. Spreadsheet functions were also employed to array data to facilitate pattern analysis at each level—state, consortium, institution.

Document Coding Convention

To facilitate identification of the documents included in the study, a document coding protocol was established (Creswell, 2005). Each state was assigned a capital letter designation (Arizona = A, California = B, and so on). The letters I, J, O, and Q were excluded to avoid confusion with numerals.

State-level documents and state consortium documents were then encoded with the corresponding state letter (e.g., Arizona = A) and a number beginning with 100 (indicating a state-level document) and ending with two digits corresponding to the specific document. Institution-level documents were similarly coded with the first three digits corresponding to the specific institution. See Table 3-4 for the complete coding legend.

Document codes were included in each state table following the format in Table 3-4. Since there were more than 300 individual documents were reviewed for the study, use of individual

document codes facilitated the management of data arrays to a more convenient size. Table B-1 is a listing of the states, institutions, document codes, and specific documents addressed in the study.

Assignment of Classifications to Policy Diffusion

Once protocols in Appendix A were completed, the various data elements in each protocol were summed to create a total and a percentage. This created a set of tables that were used to discover patterns in the data at state, consortium, and institutional levels. The aggregate pattern data were also translated into a table where percentages of the occurrence of certain patterns at all three levels and for each factor were examined and classified as *low* (less than 34%), *moderate* (34%-68%), or *high* (greater than 68%) policy diffusion.

Threats to Validity and Reliability

The sample of Board Member institutions of the League for Innovation in the Community College (n=37) represents approximately 5% of the 800 members of that organization; however, the sample may not be reflective of the broader group of community colleges. For example, community colleges with limited enrollment may have highly limited distance education programs because of funding limitations. The findings therefore apply only to the institutions sampled. In addition, because of their interest in technology, all Board Member institutions of the League for Innovation in the Community College are also Alliance Advantage members. Alliance Advantage Members of the League may be inherently more interested in distance education when compared to regular members of the League or to nonmember institutions. This distinction could serve to bias the study. Institutions with a commitment to technology might skew the findings toward concluding that the level of diffusion of online distance education policy and practice is stronger than is actually the case.

While the sample of states (n=15) represents 30% of the 50 states, it is possible that this sample overlooked states having either robust or limited distance education policies. To account for these potential limitations and thus increase validity (trustworthiness) of the analysis, the study sought to triangulate policies at state, consortium, and institutional levels (Glesne, 1999; Kirk & Miller, 1986).

Purposive sampling also can be subject to three sampling errors (Hoepfl, 1997). These are distortions due to insufficient breadth of the sample, maturation, and shallow data collection for each site sampled. The study guarded against these three errors by sampling documents across a variety of institutions (breadth) and by examining complete documents (depth). Maturation, or changes in the sample over time, was addressed by taking the most current document available as the date of the sample.

According to Altheide (1996), document reviews are subject to limitations to the retrievablility and access of the documents themselves. Bureaucracies, reproduction technologies, and cultural restrictions regarding the use and availability of key documents can delimit the researcher's access (Altheide, 1996; McCoy & Sorenson, 2003). However, the advent of the Internet and other information technologies have made many institutional guidelines and state policies readily available. Since the documents for this study are public records, access restrictions are considerably fewer than if the documents were private (McCollough, 2004). Furthermore, purposive sampling of several states and community colleges reduced the impact of restricted access to documents by a single state or institution (Patton, 1990).

Table 3-1. Sample states and institutions

State	Institution
Arizona	Maricopa Community College District
	Chandler-Gilbert Community College
	Estrella Mountain Community College
	Gateway Community College
	Glendale Community College
	Mesa Community College
	Paradise Valley Community College
	Phoenix College
	Rio Salado College
	Scottsdale Community College
	South Mountain Community College
California	Foothill-De Anza Community College District
	De Anza College
	Foothill College
	San Diego Community College District
	San Diego City College
	San Diego Mesa College
	San Diego Miramar College
Florida	Santa Fe Community College
Illinois	Morane Valley Community College
Iowa	Kirkwood Community College
Kansas	Johnson County Community College
Maryland	Anne Arundel Community College
Michigan	Delta College
Missouri	St. Louis Community College
New York	Monroe Community College
North Carolina	Central Piedmont Community College
Ohio	Cuyahoga Community College
	Sinclair Community College
Oregon	Lane Community College
Texas	Dallas County Community Colleges
	Brookhaven College
	Cedar Valley College
	Eastfield College
	El Centro College
	Mountain View College
	North Lake College
	Richland College
Washington	Seattle Community College District
	North Seattle Community College
	Seattle Central Community College
	South Seattle Community College

Table 3-2. Populations and Carnegie classifications of sample community colleges

Institution	Institutional demographics	Carnegie classification (Note 1)	Source document identifier
Maricopa Community College District, AZ	250000 +	VL2 (Note 2)	A11011
Foothill-De Anza Community College District, CA	44000	VL2	B11003
San Diego Community College District, CA	47395	VL2	B12006
Santa Fe Community College, FL	15855	VL2	C11109
Moraine Valley Community College, IL	47000+	VL2	D11108
Kirkwood Community College, IA	15064	VL2	E11112
Johnson County Community College, KS	34000 +	VL2	F11105
Anne Arundel Community College, MD	20920	VL2	G11106
Delta College, MI	6500	L2 (Note 3)	H11104
St. Louis Community College, MO	27460	VL2	K11013
Monroe Community College, NY	11815	VL2	L11105
Central Piedmont Community College, NC	70000+	VL2	M11106
Cuyahoga Community College, OH	55000+	VL2	N11103
Sinclair Community College, OH	24000	VL2	N11208
Lane Community College, OR	36000	VL2	P11105
Dallas County Community Colleges, TX	84000	VL2	R11006
Seattle Community College District, WA	54000 +	VL2	S11002

Note 1. The Carnegie Foundation for the Advancement of Teaching (2007).

Note 2. VL2 classification—*Very Large, Two-Year*—is for institutions with fall enrollment data of at least 10, 000 at a 2-year institution.

Note 3. L2—*Large, Two-year*—classification is for institutions with fall enrollment data of 5,000-9,999 at a 2-year institution.

Table 3-3. Factors and levels of analysis. (Unit of analysis: A policy document)

Factors Levels	Management and organization	Faculty	Students
State			
• Statutes			
• Administrative code			
• Departmental regulations			
• Other distance education documents			
State consortia policies and practices			
Institutional Policies and Practices			
• Community college district or individual college			

Table 3-4. Document coding legend

State	State codes	State level and consortium codes	Community college district codes	Individual community college codes	Individual document codes
Arizona	A	100	110	111	01
California	B	100	110	112	02
Florida	C	100	110	113	03
Illinois	D	100	110	114	04
Iowa	E	100	110	115	05
Kansas	F	100	110	116	06
Maryland	G	100	110	117	07
Michigan	H	100	110	118	08
Missouri	K	100	110	119	09
New York	L	100	110	120	10
North Carolina	M	100	110	121	11
Ohio	N	100	110	122	12
Oregon	P	100	110	123	13
Texas	R	100	110	124	14
Washington	S	100	110	125	15

Examples: A10001 First Arizona state-level document.
B11001 First Foothill-De Anza Community College (CA) District document.
B11101 First De Anza College (CA) document.

CHAPTER 4
FINDINGS

Introduction and Purpose

The purpose of the study was to conduct a normative analysis of policy on technology-mediated distance education in community colleges at state, consortia, and institutional levels to understand the diffusion of policy concepts in this increasingly central medium. To accomplish the normative analysis, the study compared policy directives and program attributes at the state, consortia, and institutional levels to factors derived from policy analysis frameworks (PAF). The goal of the study was to determine the degree of diffusion of policy across the three levels. Policy and program attributes were also compared to acknowledged best practices.

This chapter presents the findings from the comparisons of the content of policy documents and program directives to the policy analysis factors depicted in Table A-1. The complete dataset for this study is available by contacting the researcher at bob_amason@yahoo.com. A pattern was identified in the data when the factor was exhibited by more than 50% of the sample (McCoy & Sorrenson, 2003).

State-level Findings

Fifteen state community college governance structures were represented in the sample. Community college state governance structures are summarized in Table 4-1. A pattern was identified when eight or more states' documents disclosed the same policy characteristic (McCoy & Sorensen, 2003). States in the sample exhibited few patterns when policy documents were compared to the policy analysis factors.

Patterns in State Policy Elements Related to Management and Organization Policy Analysis Factors

Patterns were identified in two of five Management and Organization PAF categories. Within the *collaboration* category a single pattern was observed in state-level policy guidance

regarding the organization structure factor. Eight states exhibited a pattern of "internal organizational structure which enables the development, coordination, support, and oversight of electronically offered programs": California, Florida, Illinois, Kansas, New York, North Carolina, Ohio, and Texas.

Within the *resources* category, patterns were identified in five factors:

- Budgets and policy statements reflect commitment to the students (8 states: CA, FL, IL, IA, KS, MI, NC, TX).
- Commitment—administrative, financial, and technical—to continuation of the program for a period sufficient to enable all admitted students to complete a degree (8 states: CA, FL, IL, KS, MD, NY, NC, TX).
- Adequacy of technical and physical plant facilities (9 states: FL, IL, KS, MD, MI, NY, NC, TX, WA).
- Consistent and coherent technical framework (9 states: CA, IL, KS, MD, NY, NC, OH, TX, WA).
- Technology appropriate to students and curriculum (10 states: CA, IL, IA, KS, MD, NY, NC, OH, TX, WA).

Additional state-level management and organization analysis

Underlying elements of state-level distance education management and organization policy were examined to enhance the analysis and to clarify state-level policy. Documents analyzed included state statutes and administrative codes, strategy documents such as strategic plans, and funding documents such as budgets.

Table 4-2 depicts a summary of state statutory guidance for Internet-mediated distance education. Statutes or administrative rules regarding Internet-mediated distance education were identified in seven states. Statutory guidance was identified in four categories: (a) *access;* (b) *funding;* (c) *facilities and infrastructure;* and (d) *directives to create plans and/or policies governing Internet-mediated distance education.* Only three states had statutes that addressed

every category: California, Florida, and Kansas. States that addressed at least one, but not all, of these four categories were Arizona, Oregon, Texas, and Washington.

Table 4-3 shows a summary of state-level distance education strategic guidance. Strategic guidance documents—with references to Internet-mediated distance education—were identified in nine states and in the following four categories: (a) *access;* (b) *student success;* (c) *enhancement of learning or quality enhancement;* and (d) *infrastructure*. Strategic guidance documents that addressed each category were identified in five states: California, Florida, Maryland, North Carolina, and Washington. States addressing at least one strategic guidance category included Iowa, Kansas, Michigan, and New York.

Table 4-4 presents a summary of state distance education funding guidance. Funding documents at state level identified policy regarding Internet-mediated distance education in six states and the following two PAF categories: (a) *budget or other funding documents address distance education* and (b) *statutes address funding for distance education*. Three states had funding guidance documents that addressed both categories: California, Florida, and North Carolina. States addressing one of the two categories were Illinois, Oregon, and Texas.

The policy analysis factors related to *tuition* and *funding formula* were addressed by only three states: California, Illinois, and North Carolina (Document Identifiers: B10001, B10002, B10004, B10005, B10010, D10010, D11101, M10001, M10004). North Carolina employed an external consultant to review state funding for distance education and to recommend policy for such areas as tuition (Rogers, 2001). The consultant recommended against establishing a funding formula, citing the lack of development of the online delivery modality as impeding routine operations and rendering a formula ineffective (Rogers, 2001). A more detailed funding analysis of distance education at both state and institutional level is presented in Table 4-5.

Potential relationship among state-level factors

Patterns were observed when comparing the results of the state statutory, strategic, and funding policy analysis to factors in the two Management and Organization policy categories previously identified. Table 4-6 presents this finding in graphic format. States with documented statutory, strategic, and funding policies, which addressed Internet-mediated distance education, also spoke to many of the policy analysis factors.

While only a few states had enacted legislation addressing distance learning in post-secondary education and/or published strategic guidance, the guidance was thematically consistent, as evidenced by selected statutory and strategic guidance statements presented in Tables 4-7 and 4-8. The statements illustrated—among states that had published such policy—that a general state-level commitment existed to educational access, student success, educational quality, and infrastructure viability. These statements reinforced the potential for a relationship between legal and formal guidance documents, such as statutes, strategic plans and budgets, and management and resource decisions at the state level.

Patterns in State Policy Elements Related to Faculty Policy Analysis Factors

No patterns were identified, and documents expressing state-level policy regarding faculty were limited. No state-level policy documents were found regarding factors in two PAF categories. In the *faculty rewards* category, issues of faculty workload and compensation were considered in three policy analysis factors: *stipends, promotion and tenure*, and *merit increases*. Additionally, within the *opportunities to learn about technology and new applications* category, no documents were found that addressed the *release time* policy analysis factor.

Patterns in State Policy Elements Related to Students and Participants Policy Analysis Factors

No patterns were identified for the Students category at the state level; however, some documents indicated partial state-level policy regarding students. Documents having partial state-level student policy for distance education were identified in California, Illinois, Kansas, Maryland, New York, Texas, and Washington. These states were also observed to have elements of statutory, strategic, or funding guidance regarding Internet-mediated distance education.

State Community College Distance Education Consortia Findings

State Community College Distance Education Consortia Typology

Research in virtual universities and consortia has been limited (McCoy & Sorensen, 2003), and the term *consortium* was used in the distance education literature and in policy documents to mean a variety of arrangements among collaborative partners (Wolf & Johnstone, 1999). For the purposes of this study, a *virtual university/college consortium* is a nondegree granting collaborative relationship among accredited institutions that are linked online (Wolf & Johnstone, 1999). All state consortia in this study met this definition. Table 4-9 is a listing of state distance education consortia for the sample states.

Patterns in State Community College Distance Education Consortia

State consortia policy elements and supporting document identification were organized into a table which was then used to discover patterns in the data. Because Arizona and Missouri did not have state distance educational consortia, the sample size for state consortia was 13. Therefore, a pattern was identified when seven or more states' consortium documents disclosed the same policy characteristic (McCoy & Sorensen, 2003).

Patterns in state consortium elements related to management and organization policy analysis factors

Patterns were identified in three of five Management and Organization PAF categories. Within the *collaboration* category a single pattern was observed in policy guidance regarding the organization structure factor. Eight consortia exhibited a pattern of "internal organizational structure which enables the development, coordination, support, and oversight of electronically offered programs": Illinois, Kansas, Michigan, New York, North Carolina, Ohio, Texas, and Washington.

Within the *resources* category, patterns were identified in four of six factors:

- Adequacy of technical and physical plant facilities (9 states: IA, MD, MI, NY, NC, OH, OR, TX, WA).
- Consistent and coherent technical framework (11 states: CA, IL, IA, MD, MI, NY, NC, OR, OH, TX, WA).
- Reasonable technical support (10 states: IL, IA, MD, MI, NY, NC, OR, OH, TX, WA).
- Technology appropriate to students and curriculum (11 states: CA, IL, IA, MD, MI, NY, NC, OR, OH, TX, WA).

Within the *curriculum and individual courses* category, patterns were identified in 7 of 10 factors:

- Delivery modes (10 states: IL, IA, MD, MI, NY, NC, OH, OR, TX, WA).
- Course/program selection (8 states: IL, IA, MI, NY, NC, OH, TX, WA).
- Plans to develop curricula/individual courses (10 states: IL, IA, MD, MI, NY, NC, OH, OR, TX, WA).
- Individual sequences (11 states: CA, IL, IA, MD, MI, NY, NC, OH, OR, TX, WA).
- Course development (8 states: IL, IA, MI, NY, NC, OH, TX, WA).
- Entire program delivery (10 states: IL, IA, MD, MI, NY, NC, OH, OR, TX, WA).
- Interactivity requirements (10 states: IL, IA, MD, MI, NY, NC, OH, OR, TX, WA).

Many of the consortia exhibited Web-based links that facilitated student search for entire courses, degrees, institutions, and course sequences.

Patterns in state consortium elements related to faculty policy analysis factors

Patterns were identified in three factors in the *faculty support* category:

- Student help (8 states: FL, IL, IA, MD, NY, OH, OR, TX).
- Technical assistance (9 states: FL, IL, IA, MD, NC, NY, OH, OR, TX).
- Training (9 states: FL, IL, IA, MD, NC, NY, OH, OR, TX).

A preponderance of state-consortia appeared to have addressed faculty members support needs. Similar to the state-level analysis, state consortium level documents did not reveal references to faculty rewards, stipends, merit increases, and release time. Another area in which lack of patterning in the Faculty categories was illustrative was in the *intellectual property* factor. Only three state consortium documents (M10006, P10004, R10009) identified intellectual property considerations as a policy element.

Patterns in state consortium elements related to students and participants policy analysis factors

Within the Students and Participants PAF, patterns were identified in every *support* category. Because 12 factors are within this category, and patterns are supported by 10 to 11 state consortia, they are not individually identified here. States where no documents were found for these factors were Kansas and Ohio.

Within the *requirements and records* category, a single pattern was identified for the residency requirements factor. Nine state consortia identified residency requirements for registration: California, Florida, Iowa, Michigan, New York, Ohio, Oregon, Texas, and Washington. All sample state distance education consortia practiced the distributed service model (Epper & Garn, 2004), and directed the student through the website to select and enroll in

a home institution. Within the requirements and records category, no patterns were identified at the consortium level for factors associated with articulation and transfer.

Institution-level Findings

Characteristics of Institutions and Districts

The sample for this study included 37 community colleges located in 15 states. As noted in Table 3-2, all but one of the institutions were classified by the Carnegie Foundation as *Very Large Two-Year* (Carnegie Foundation for the Advancement of Teaching, 2007). The sample was further characterized as having 12 independent institutions and 25 colleges that were part of five larger districts. As explained in Chapter 3, for the purposes of this study, the institutions under district control were aggregated at district level. Aggregating at district level resulted in a total of 17 individual institutions or districts in the sample (n=17).

Patterns in Selected Institutions' Distance Education Policy

Institutional-level and district-level policy elements and supporting document identification were arranged in a table, and the resulting array was used to discover patterns in institutional policy. The pattern was identified when nine or more institution or district documents disclosed the same policy characteristic (McCoy & Sorensen, 2003). The institutional level was notable in that not only were patterns identified in 37 of the 50 policy analysis factors (74%), but in many cases the percentage of institutions exhibiting a particular factor was 100%. Specifically, all 15 of the policy analysis factors regarding students displayed patterns, with only 2 factors having fewer than 17 of 17 institutions represented.

Patterns in institution or district elements related to management and organization policy analysis factors

In the Management and Organization PAF, 17 of 24 (70.83%) policy analysis factors exhibited patterns. The patterns were discerned in all three of the five categories under Management and Organization.

Within the *collaboration* category, five of seven factors exhibited institution-level patterns. Twelve institutions' documents identified "internal organizational structure which enables the development, coordination, support, and oversight of electronically offered programs." Community colleges or districts not exhibiting this factor were:

- San Diego Community College District, California
- Santa Fe Community College, Florida
- Delta College, Michigan
- St. Louis Community College, Missouri
- Monroe Community College, New York

Results were similar for the following factors:

- Organizational units addressed in policy documents (11 institutions)
- Program is consistent with the institution's role and mission (16 institutions)
- Intended student population, curriculum, modes or venue of instruction (16 institutions)
- Articulation and transfer policies (15 institutions)

Within the *resources* category, the following factors exhibited 100% policy concurrence:

- Adequacy of technical and physical plant facilities
- Consistent and coherent technical framework
- Reasonable technical support
- Technology appropriate to students and curriculum

However, within the *resources* category, financial management factors of *budget and commitment to program continuation* were found at only five and seven institutions, respectively. These two policy elements were examined more closely and results are presented at Table 4-6. Several institutions' budgets were blocked from public access, and budget or financial documents with mention of distance education were identified in only two institutions: Moraine

Valley Community College, Illinois, and Delta College, Michigan. Exhibiting the confusing nature of technology-mediated distance education financing is the fact that technology spending at Moraine Valley spiked sharply from 2003 to 2005, while at Sinclair Community College, Ohio, funding for technology showed a net decrease in the same period.

In the *curriculum and individual courses* category, one testing factor and the *contact hours definition* factor failed to exhibit patterns. The *testing* factor was "…examinations are employed (paper, online, demonstrations of competency) take place in circumstances that include firm student identification. The institution otherwise seeks to assure the integrity of student work" was identified for only seven institutions. Similarly, a *contact hour definition* factor was identified in 4 of 17 institutions. The remaining factors in curriculum and individual courses were identified in documents at 16 or 17 institutions, depending upon the factor..

Patterns in institution or district elements related to faculty policy analysis factors

Faculty support and *training* factors exhibited patterns in the Faculty PAF. Faculty support factors of "Student help: provides orientation and training including strategies for effective interaction" and "Technical assistance: Technical support services, including help desk services" were found in documents at 15 institutions. Factors associated with faculty training were found in 14 documents for "ongoing program of appropriate technical, design, and production support for participating faculty members" and "provide training and support." The training on a new technology factor was found in 11 documents.

On the other hand, as with state-level and consortium-level findings, *faculty rewards* and *release time* were largely not identified at the institution level. Only three institutions identified stipend and release time policies, while only two institutions linked promotion and tenure or merit increases to distance education efforts. Similar to state and consortium level findings, copyright and intellectual property policies did not exhibit patterns at institutional levels.

Patterns in institution or district elements related to students and participants policy analysis factors

As mentioned previously, policy documents indicated patterns in 15 of 15 student-oriented policy analysis factors. Furthermore, 13 of the 15 factors had 100% institutional policy participation. Only 2 of the 15 student-oriented factors had patterns with fewer than 17 institutions' participation. These two areas were *acceptance of courses from other places* and *transfer of credit,* each of which had documented policy at 14 institutions.

Institutional Strategic Guidance Analysis

In addition to the institutional funding guidance analysis previously discussed and shown in Table 4-6, institutional strategic guidance was examined. Table 4-10 indicates that 10 of 17 institutions (58.8%) have published strategic guidance for distance education. Similar to the state-level strategic analysis, the identified themes were access to education, student success, enhancement of learning or quality, and infrastructure. Institutional strategic guidance was identified in seven states at institutions where the parent state also had state-level strategic guidance.

Summary

Table 4-11 presents a summary of the results of the study. In the Management and Organization factors, patterns were identified in the data that indicated policy existed at state, consortium, and institutional levels for organization structure and for resource management for technology-mediated distance education. None of the three levels—state, consortium, institution—evidenced patterns in tuition and funding formulas. Statutory, strategic guidance, or funding documents at state and institutional levels evidenced themes of educational access, student success, educational quality, and infrastructure viability. At consortium and institution levels, patterns were observed in many of the curriculum and individual courses factors.

All state consortia in the sample met the definition of a *virtual university/college consortium* as a nondegree granting collaborative relationship among accredited institutions that are linked online (Wolf & Johnstone, 1999). These relationships met the definition of *decentralized* administration (Epper & Garn, 2004). Within community college districts, varying degrees of centralized management and administration of distance education were observed from distributed to highly centralized operations (Epper & Garn, 2004). All but one district, and all individual institutions, exhibited some degree of centralized control.

Patterns were identified for faculty support (training and preparation) at consortium and institutional levels. At state and consortium levels, no documents were found regarding faculty rewards (stipends, promotion and tenure, and merit increases) and no release time was found to learn about new technology. At the institution level, few policies were found in the faculty *rewards* or *release time* factors. Another area where lack of patterning in the Faculty factors was the *intellectual property* factors. At all levels, only a few documents identified intellectual property considerations as a policy element.

At consortium and institution levels, many patterns were identified in the data for the Students/Participants PAF with 100% of institutions documenting policies for several factors. Patterns at institutional level for Student factors indicated 100% matches for 13 of 15 factors. Two Student factors related to articulation and transfer exhibited patterns, but 3 of 17 institutions were mute on these factors. Had these institutions' documents addressed articulation and transfer policies, the Students factor for intuitions would have reached unity.

Table 4-1. Community college state-level governance structures

State	Policy-making organization
Arizona	No centralized state-level governance for community colleges
California	Board of Governors of the California Community Colleges
Florida	State Board of Education and Florida Community College System (FLCCS)
Illinois	Board of Higher Education and Illinois Community College Board (ICCB)
Iowa	State Board of Education and locally elected boards of directors
Kansas	Kansas Board of Regents (KBOR)
Maryland	Maryland Higher Education Commission
Michigan	Michigan State Board of Education and Michigan Community College Association
Missouri	Missouri Coordinating Board for Higher Education
New York	Board of Trustees for City University of New York (CUNY) or Board of Regents of State University of New York (SUNY)
North Carolina	North Carolina State Board of Community Colleges
Ohio	Under revision (Schmidt, 2007)
Oregon	Oregon Board of Education
Texas	Texas Higher Education Coordinating Board
Washington	State Board for Community and Technical Colleges

(Melear & Leas, 2006)

Table 4-2. State statutory distance education guidance summary

State	Access	Funding	Facilities/ infrastructure	Create plans/policies	Document reference code
AZ	✓				A10001
CA	✓	✓	✓	✓	B10001
FL	✓	✓	✓	✓	C10001
KS	✓	✓	✓	✓	F10002
OR	✓				P10002
TX	✓		✓		R10007
WA	✓		✓	✓	S10001 S10002

Table 4-3. State-level distance education strategic guidance summary

State	Access	Student success	Enhance learning or quality	Infrastructure	Document reference code
CA	✓	✓	✓	✓	B10002
FL	✓	✓	✓	✓	C10003
IA	✓				E10001
KS	✓	✓	✓		F10003, F10009
MD	✓	✓	✓	✓	G10001
MI			✓		H10001
NY	✓	✓	✓		L10001, L10002
NC	✓	✓	✓	✓	M10002
WA	✓	✓	✓	✓	S10003, S10004

Table 4-4. State distance education funding analysis summary

State	Budget or other funding documents address distance education	Statutes address funding for distance education	Document reference code
CA	✓	✓	B10004, B10005
FL	✓	✓	C11106
IL	✓		D10010
NC	✓	✓	M10005
OR	✓		P10008
TX	✓		R10005

Table 4-5. State and institutional distance education funding guidance summary

State	Distance education funding status	Community college or district	Distance education funding status
Arizona	1	Maricopa	1
California	2, 4	Foothill-De Anza	1
		San Diego	3
Florida	2, 5	Santa Fe	3
Illinois	2, 6, 7	Moraine Valley	2, 8
Iowa	1, 9	Kirkwood	3
Kansas	1	Johnson County	3
Maryland	1	Anne Arundel	3
Michigan	1	Delta	2, 10
Missouri	1	St. Louis	3
New York	1, 11	Monroe	3, 11
North Carolina	2, 12	Central Piedmont	3
Ohio	1	Cuyahoga	3
		Sinclair	1, 13
Oregon	2	Lane	1
Texas	2, 14	Dallas	3
Washington	1	Seattle	3

Note 1. Budget or other funding source documents indicate no mention of distance education, online, e-learning, or technology associated with distance education.

Note 2. Budget or other funding source documents address distance education, online, e-learning or technology associated with distance education.

Note 3. Budget document not identified.

Note 4. California budget documents contained several mentions of distance education (Doc Id: B10004, B10005).

Note 5. Florida's 2007-2008 budget for community colleges included $351,397 for the Florida Distance Learning Consortium. No other distance education funding line items were identified (Doc Id: C11106).

Note 6. Illinois's FY2008 Tech Prep Consortium Grant Guidelines (Illinois Community College Board, 2007) included the following language: "Use educational technology and distance learning, as appropriate, to involve all the participants in the consortium more fully in the development and operation of programs" (Doc Id: D10010, p. 3).

Note 7. "Create Rural Learning Initiative" includes $10 million funding for distance learning technology (Illinois State Budget, Fiscal Year 2008). No other references to distance education were identified (Doc Id: D10011).

Note 8. Moraine Valley Community College expended funds in 2005-2006 to support growth of online classes. FYs 2003, 2004, 2005 showed a sharp spike in technology and equipment expenditures over previous and subsequent years. The expenditure on technology was not broken down into subcategories. Building and land/land improvement expenditures remained relatively steady (Moraine Valley Community College, 2006, Doc Id: D11109).

Note 9. Institutions identified technology as an area of deep concern in narratives included in the Iowa Community Colleges Fiscal Year 2007 Certified Budgets (Division of Community Colleges and Workforce Preparation, 2006, Doc Id: E10004).

Table 4-5. Continued

Note 10. Delta College (MI) identified a total of $47,000 for distance education in the fiscal year 2006-2007 budget (Delta College, 2006, Doc Id: H11104).

Note 11. Monroe Community College is part of State University of New York system. There is no mention of distance education programs in the operating budget for community colleges (State University of New York [SUNY], 2006, Doc Id: L10007).

Note 12. North Carolina addresses distance education in the state budget (Blosser, 2007; Office of State Budget and Management, 2007, Doc Id: M10005) and has also conducted studies of funding for distance education (Rogers, 2003, Doc Id: M10004).

Note 13. Sinclair Community College (2007) cost analysis indicated a net decrease in technology expenditure from 2002-2007 (Doc Id: N11207).

Note 14. The Texas State Budget for Fiscal Years 2008-2009 (Office of the Governor, 2007, Doc Id: R10005) explicitly addresses distance education; however, the legislative overview of higher education finance in Texas does not contain references to distance education, e-learning or online education (Legislative Budget Board Staff, 2007, Doc Id: R10006).

Table 4-6. Comparison among statutory, strategic and funding guidance and policy analysis factors

States	AZ	CA	FL	IL	IA	KS	MD	MI	NY	NC	OH	OR	TX	WA
Statutes	✓	✓	✓			✓						✓	✓	✓
Strategic Guidance		✓	✓		✓	✓	✓	✓	✓	✓				✓
Funding Guidance		✓	✓	✓		✓				✓		✓	✓	
Collaboration:														
Internal organizational structure		✓	✓	✓		✓			✓	✓	✓		✓	
Resources														
Budgets		✓	✓	✓	✓	✓		✓		✓			✓	
Commitment to continue program		✓	✓	✓		✓	✓		✓	✓			✓	
Adequacy of technical and fiscal plant facilities			✓	✓		✓	✓	✓	✓	✓			✓	✓
Consistent and coherent technical framework			✓	✓		✓	✓	✓	✓	✓			✓	✓
Technology appropriate		✓		✓	✓	✓	✓		✓	✓	✓		✓	✓

Table 4-7. Selected Examples of State Statutory Guidance

State	Statute	Guidance	Document reference code
CA	Legislative findings and declarations; Intersegmental working group; Guiding principles, 3 Cal Ed Code § 66941 (2007)	(f) In expanding the use of distance learning technology, the state should emphasize the delivery of education and training services to populations currently not receiving those services, the ease of access by educational institutions to the technology, and the lower cost over time of providing instruction through distance learning rather than on site. (h) Assurance that the standards for course and program quality applied to distance education are rigorous in meeting accreditation standards, Universal Design Standards, and standards currently applied to traditional classroom instruction at higher educational institutions in the areas of course content, student achievement levels, and coherence of the curriculum.	B10001
FL	Distance learning duties, Fla. Stat. § 1001.28 (2007)	(1) Facilitate the implementation of a statewide coordinated system and resource system for cost-efficient advanced telecommunications services and distance education which will increase overall student access to education.	C10001
KS	State Boards, Commissions and Authorities,74 K.S.A. § 74-3202c (2006)	(9) Develop and implement a comprehensive plan for the utilization of distance learning technologies. . . .	F10002
OR	ORS § 759.445 (2006)	759.445. Connecting Oregon Communities Fund; School Technology Account; Public Access Account.	P10002
TX	Subchapter e. Approval of distance education, off-campus, and extension courses and programs for public institutions. 19 TAC § 4.106 (2006)	(a) Prior to offering any distance education, off-campus, or on-campus extension courses or programs for the first time, institutions of higher education shall submit an Institutional Report for Distance Education, and Off-Campus and On-Campus Extension Instruction to the Board for approval. (b) Institutional academic and administrative policies shall reflect a commitment to maintain the quality of distance education, off-campus, and on-campus extension courses and programs in accordance with the provisions of this subchapter.	R10007

Table 4-7. Continued

State	Statute	Guidance	Document reference code
WA	K-20 educational network board — Powers and duties, Rev. Code Wash. (ARCW) § 43.105.805 (2007)	Adopt, modify, and implement policies to facilitate network development, operation, and expansion. Such policies may include but need not be limited to the following issues: Quality of educational services; access to the network by recognized organizations and accredited institutions that deliver educational programming, including public libraries; prioritization of programming within limited resources; prioritization of access to the system and the sharing of technological advances; network security; identification and evaluation of emerging technologies for delivery of educational programs; future expansion or redirection of the system; network fee structures; and costs for the development and operation of the network. . . .	S10001

Table 4-8. Selected examples of state strategic guidance

State	Document Title	Guidance	Document reference code
CA	*California community colleges system strategic plan (2006).*	Expand and sustain an appropriate range of delivery methods to enhance access while maintaining and promoting high standards of academic rigor and excellence (p. 26).	B10001
FL	Florida Community College Strategic Plan (2005)	Priority Goal 7: Expand Learning via Emerging Technologies Issue: Enhancing Learning Technologies Initiative 7.1 Create a statewide repository for reusable, high-quality learning objects (digital and nondigital) which can be used or referenced in learning environments. Initiative 7.3 Pursue selected support services for students, educators, institutions, and DOE in support of distance learning. Initiative 7.4 Implement statewide equal access to enhanced electronic library resources and services.	C10001
KS	A plan for coordination of Kansas post-secondary education (2000).	Goal 3: The Kansas post-secondary education system should seek to minimize barriers to access and facilitate institutional missions to encompass lifelong learning. In extending access, the Board seeks proposals that apply 21st century information technology solutions to complement traditional "brick and mortar" options.	F10009
NC	*Strategic plan for distance learning 2003-2004 through 2008 – 2009 for the North Carolina Community College System.*	An entire separate strategic plan existed for distance education. Goal 2. Develop high-quality, Web-based degree programs for use by all colleges in the state (p. 10).	M10002

Table 4-8. Continued

State	Document Title	Guidance	Document reference code
WA	*The cornerstones report: An educational technology strategic plan for the Instruction Commission (2005).*	Technology and distance education plan. Cornerstones: A. Access is our heritage. System-wide themes: A1. Expand Distance Learning A2. Develop Statewide Portal B. Affordability is our mandate. System-wide theme: B1. Develop Statewide Purchasing Processes C. Learning environments are our specialty. System-wide themes: C1. Develop Information Literacy Programs C2. Conduct Technology Training D. Infrastructure is our advantage. System-wide theme: D1. Develop Online Resource Warehouses E. Quality is our trademark. System-wide theme: E1. Determine Best Practices	S10001

Table 4-9. State-level distance learning consortia

State	Consortium name	Uniform Resource Locator (URL)
Arizona	None	
California	California Virtual Campus	http://www.cvc.edu
Florida	Florida Distance Learning Consortium	http://www.fdlc.org
Illinois	Illinois Community Colleges Online	http://www.ilcco.net/ILCCO/index.cfm
Iowa	Community College Online Consortium	http://www.iowacconline.org/
Kansas	Kansas Digital Learning (KANDL)	http://www.kansasregents.org/KANDL/index.html
Maryland	Marylandonline—Statewide Intersegmental consortium.	http://www.marylandonline.org/
Michigan	Michigan Community College Virtual Learning Collaborative	http://vcampus.mccvlc.org/index.asp?dir='welcome'&content
Missouri	None	
New York	SUNY Learning Network	http://sln.suny.edu/index.html
North Carolina	North Carolina Virtual learning community	http://vlc.nccommunitycolleges.edu/
Ohio	Ohio Learning Network	http://www.oln.org/
Oregon	Oregon Network for Education	http://oregonone.org/
Texas	Virtual College of Texas	http://www.vct.org/
Washington	Washington Online	http://www.waol.org/home/default.asp

Table 4-10. Institution-level distance education strategic guidance summary

Institution and state	Access	Student success	Enhance learning or quality	Infrastructure	State-level strategic guidance found	Document reference code
Maricopa CCD, AZ	✓	✓	✓			A11001
Foothill-De Anza CCD, CA	✓	✓	✓	✓	✓	B11001, B12001, B12201, B12301
Moraine Valley CC, MI		✓	✓		✓	D11101, D11102
Kirkwood CC, IA	✓	✓	✓	✓	✓	E11101
Johnson County CC, KS	✓	✓	✓		✓	F11101
Anne Arundel CC, MD				✓	✓	G11101
Monroe CC, NY		✓		✓	✓	L11101
Central Piedmont CC, NC	✓	✓	✓		✓	M11101
Cuyahoga CC, OH	✓					N11101
Sinclair CC, OH	✓	✓	✓			N11206

Table 4-11. Pattern synopsis by policy level and factor

Factor	Management and organization		Faculty		Students		Total patterns identified	
	Factors observed	%	Factors observed	%	Factors observed	%	Factors observed	%
Total factors	24		11		15		50	
Levels								
State-level	6	25.00	0	0.00	0	0.00	6	12.00
State-consortium	14	58.33	4	36.36	13	86.67	31	62.00
Institutional	17	70.83	5	45.45	15	100.00	37	74.00
Whole system totals and percentages	37	51.39	9	27.27	28	62.22	74	49.33

CHAPTER 5
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary of the Study

The purpose of this study was to conduct a normative analysis of policy on technology-mediated distance education in community colleges at state, consortia, and institutional levels to understand the diffusion of policy concepts in this increasingly central medium. To accomplish the normative analysis, the study compared policy directives and program attributes at the state, consortia, and institutional levels to factors derived from policy analysis frameworks (PAF). The goal of the study was to determine the degree of diffusion of policy across these three levels.

Discussion of Findings

Findings at all three levels provided insight into the state of policy at state, consortium, and institutional levels across the factors of Management and Organization, Faculty, and Students. Table 5-1 provides an overview of total patterns identified by level and factor. Beyond the patterns indicating existence of policy, instances occurred where absence of a pattern in the data may be seen as a pattern in itself. The findings are summarized and discussed below.

Findings Regarding Policy Diffusion in Management and Organization, Finding 1: Relationship Between Formal Guidance Documents and Management Decisions

Patterns in the PAF data were identified that indicated that policy existed at state, consortium, and institutional levels for *organization structure* and *resource management* for technology-mediated distance education. However, none of the three levels—state, consortium, institution—evidenced patterns in factors for *tuition* and *funding formulas*. This absence of policy suggested a pattern in reverse.

Themes of educational access, student success, educational quality, and infrastructure viability existed in statutory, strategic guidance, or funding documents at state and institutional levels. These findings suggested a relationship between statutes and formal guidance documents,

such as strategic plans and budgets, and management and resource decisions for technology-mediated distance education at all levels. For higher education, the purposes for distance education have been in extending educational opportunities for new audiences to allow learner convenience or to foster economic development by expanding learning access (Perraton, 2003). The themes of educational access, student success, educational quality, and infrastructure viability identified in the study were indicative of the strategic nature of the state-level management of Internet-mediated distance education. The literature regarding distance education policy also identified access, economics, technology, and cost (Perraton, 2003). Community colleges in particular have been interested in distance education as a means for fostering access for continuous learning and also for promoting the concept of learning without limitations of place and time (O'Banion, 1997; Tracy-Mumford & Parke, 2000).

Educational access was a finding in state statutes in this study for 100% of the states with statutes that addressed distance education (Table 4-2). Similarly, in states with strategic plans that addressed distance education, access to education was a theme in all but one (Table 4-3). Oregon's 2005 strategic plan for community colleges identified a goal of "taking college to the student through distance delivery" (Oregon Department of Community College and Workforce Development, 2005, p. 2).

Technology (infrastructure) was an enabling element which provided opportunity to expand access and which merited investment (Perraton, 2003). In the same manner as the educational access theme, five of seven state statutes addressing distance education included infrastructure as a feature (Table 4-2). Similarly, infrastructure featured in five of nine state-level strategic plans addressed distance education (Table 4-3).). Washington's *Cornerstones Report* identified both access and infrastructure as main goals (IC Planning Taskforce, 2005). North

Carolina's distance learning strategic plan's goals one and five were access and infrastructure goals, respectively (Parker, McGraw, Williams, & Randall, 2004).

The few examples of tuition and funding policy at all levels (particularly at state level) contributed to confusion in this area. Documents in only three states addressed tuition, fees, and funding formulae. However, this nonpattern was difficult to interpret since seven states (at least briefly) mentioned distance education in their budget or other community college funding documents. A North Carolina management analysis specifically recommended against a funding formula for distance education (Rogers, 2001). It was therefore impossible to arrive at a conclusion regarding the status of Management and Organization policy regarding tuition and fees or funding formulas.

With the advent of online learning, the environment for community colleges became more complex and three-dimensional (McCain & Jukes, 2001; Foster, 2004). The confluence of state-level community college governance structures, consortia, individual institutions, community college districts, regional accreditation organizations, and many more policy actors has created a system that requires management (Pacey & Keough, 2003). Strategic planning, as a discipline, moved from a bias for formulation to a bias for implementation (Dooris, Kelley, & Trainer, 2002). Therefore, the findings in Chapter 4 regarding state-level convergence of statutes, strategy, and funding guidance indicated that states with high policy diffusion in Management and Organization factors in Internet-mediated distance education also have strong statutory and strategic guidance (Table 4-6).

Findings Regarding Policy Diffusion in Management and Organization, Finding 2: Relationship Between Accreditation Guidelines and Curriculum and Individual Courses Policy

At consortium and institution levels, many patterns were observed in the curriculum and individual courses category. Many of the PAF factors for this study were derived from the

Interregional Guidelines for Electronically Offered Degree and Certificate Programs (2nd ed.) (Middle States Higher Learning Commission, 2002). Therefore, a possible relationship existed between accreditation standards and institutional distance education policy regarding curriculum and individual courses.

The policy analysis frameworks (PAF) proposed by a variety of researchers were largely focused on institution level factors (Berge, 1998; Gelman-Danley & Fetzner, 1998; King et al., 2000; Levy, 2003; Osika, 2006). Curriculum and instruction factors were features of all these PAF. Moreover, quality benchmarks (Phipps & Merisotis, 2000) and the *Interregional Guidelines for Electronically Offered Degree and Certificate Programs* (2nd ed.) (Middle States Higher Education Commission, 2002) also featured curriculum and instruction factors for evaluation. The second component of the *Interregional Guidelines* is *Curriculum and Instruction*. This factor held that critical issues were not technological but were curriculum- and pedagogy-oriented (Middle States Commission on Higher Education, 2002).

Since the *Interregional Guidelines* represented accreditation standards for Internet-mediated distance education—and promulgated by all six regional accreditation associations, they had the force of evaluation documents for institutions (Lezberg, 2003). Numerous authors on organizational performance management identified a strong correlation between evaluation measures and organizational behavior (Brown, 1996; Kaplan & Norton, 1996; Pfeffer & Sutton, 2006). Therefore, the focus of institutions and consortia on curriculum and instruction may be viewed as an anticipated response to the literature on the subject, as well as accreditation standards.

Finding 2 indicated that state-level policy does not often mention curriculum and instruction. Similar to Findings 1 and 6, that fact suggested that state-level policy was less

focused upon actual operations and more on overarching guidance, such as educational access, student success, educational quality, and infrastructure viability. Proximity to the student appeared to be one driver of policy diffusion. Table 5-1 summarizes policy diffusion by level and by factor. Figure 5-1 graphically depicts the same policy diffusion. Taken together, Table 5-1 and Figure 5-1 demonstrate that state-level policy was less focused on specifics of students, faculty, and educational delivery. Institutions were on the opposite end of the policy spectrum with much greater focus on student and faculty factors.

Findings Regarding Faculty, Finding 3: Relationship Between Faculty Support and Quality

Patterns were identified for *faculty support* (training and preparation) at consortium and institutional levels. Administrators were concerned about quality of online education, and faculty members asked for training on student interaction and technical matters (Lezberg, 2003). This finding therefore suggested a high level of policy diffusion in faculty training and instructional quality in technology-mediated distance education.

Findings Regarding Faculty, Finding 4: Relationship Between Faculty Workload Management and Faculty Willingness to Engage in Distance Education

At state and consortium levels, no documents were found regarding faculty rewards (stipends, promotion and tenure, and merit increases) or faculty release time to learn about new technology. At the institution level, only a few policies were found in the *faculty rewards* or *release time* factors. Faculty members were reluctant to adopt Internet-mediated distance education (Allen & Seaman, 2006). This finding therefore suggested a relationship between policy regarding faculty workload management and rewards and faculty willingness to engage in online education.

Findings Regarding Faculty, Finding 5: Relationship Between Intellectual Property Considerations and Faculty Reluctance to Adapt Courses to the Online Modality

Another area that showed lack of patterning was illustrative was the *intellectual property* factors. At all levels, only a few documents identified intellectual property considerations as a policy element. Copyright and intellectual property rights were important to the faculty (Berge, 1998; Lipinski, 2003; Wilson, 1998; Wolcott, 2003), and this finding suggested a lack of policy diffusion regarding intellectual property considerations and faculty adaptation of courses to the online modality (Allen & Seaman, 2006).

Discussion of Findings 3, 4, and 5.

In 1950, Isadore Rabi of Columbia University publicly explained to then-Columbia University President Dwight Eisenhower, "The faculty are not employees of the university. The faculty are the university" (Alessandra, 2006). This statement outlines a key facet of educational delivery in the post-industrial, online distance education environment: The faculty are critical elements for success. Despite increasing acceptance of distance education and distance education technologies applied in more traditional settings, some educators have expressed skepticism regarding nontraditional offerings (Allen & Seaman, 2006; Carnevale, 2007; Fogg, 2005). While several studies have indicated value in online education (Lou et al., 2006), faculty members saw less value in deviating from traditional delivery methods (Allen & Seaman, 2006; Levin, 2001).

For the change from traditional education to Internet-mediated education to fully succeed, all policy actors must be aligned (Kaplan & Norton, 2006; Pacey & Keough, 2003; Thousand & Villa, 2005). Furthermore, the *Interregional Guidelines for Electronically Delivered Degrees and Certificates* (Middle States Commission on Higher Education, 2002) identified faculty as one of five components in accreditation considerations. Since faculty members had numerous concerns regarding distance education—training, rewards and incentives, and legal issues

regarding intellectual property rights—policy was required to assure them that they will be equipped to do the job and rewarded for doing it (Dalziel, 2003). “As long as distance educaton contributions are not considered in tenure and promotion decisions . . . many faculty members will be reluctant to participate in online courses” (Howell, Williams, & Lindsay, 2003, p. 6). Furthermore, Howell, Williams and Lindsay (2003) reported that a 2000 National Education Association survey had found the top concern of distance education faculty to be added workload with no increase in compensation. As an example of faculty concern regarding adequate rewards and incentives, in a 2006 resolution, Foothill-De Anza College’s Academic Senate urged the institution to set aside funds to compensate faculty members for attending distance education training (Faculty Senate, 2006).

Several researchers observed a clash of cultures within academia based upon conflicting value structures that reflect the functional views of faculty, administrators, and technology managers (Bergquist, 1992; Birnbaum, 1991; Saba, 2005). Saba (2005) made three observations: (a) faculty exist in a premodern *craft* culture focused on freedom and autonomy; (b) administrators inhabit a modern culture demanding efficiency and cost consciousness; and (c) distance education occupies a post-modern information technology culture. Aligning such diverse educational cultures in support of a radical change to new educational approaches requires a robust change model that addresses a variety of perspectives (Thousand & Villa, 2005). One change model takes into consideration the need for training (skills), resources (technology and infrastructure), and incentives (rewards) (Thousand & Villa, 2005). Despite resistance based upon these factors, faculty roles are shifting from the traditional craft structure (Saba, 2005), and many of their duties are being assumed by others, such as professional course

designers, resulting in job security concerns among faculty members (Howell, Williams, & Lindsay, 2003).

The need for faculty training was increasing (Howell, Williams, & Lindsay, 2003). Faculty members were concerned that adequate training would not be forthcoming and that working conditions might be affected as the shift in teaching roles continued (Berge, 1998; Dalziel, 2003; Pittman, 2003; Wilson, 1998). The study identified patterns in faculty training at consortia and institutional levels. Several sample institutions had training programs that appeared extensive with both academic preparation training opportunities, as well as faculty mentorships to assist new online faculty in succeeding.

Examples of institutional faculty training include Mesa Community College, Arizona, Foothill-De Anza College, California, and Moraine Valley Community College, Illinois. Mesa College had a training program that covered numerous Web pages and provided outside links to additional training sources. A Mesa College faculty member created an overview of distance education for faculty members. The overview was organized by several topics, including quality in distance learning; assessment; concerns; characteristics and standards (DeSoto, 2003). Numerous active links were provided. Foothill-De Anza College had an extensive faculty center for distance education training and assistance. Foothill Global Access covered the same topics as Mesa but added technical and course design assistance (Foothill-De Anza College, 2007). Moraine Valley Community College's Center for Teaching and Learning included links to best practices in e-learning, as well as faculty development online resources (Moraine Valley Community College, 2007).

Findings of the study indicated almost no policy documents regarding faculty rewards, yet earlier studies indicated that faculty workloads and compensation were important to the success

of distance education implementation (Hardy & Bower, 2004). Organizational change models indicated that efforts to engender new approaches encounter only gradual change when incentives are not included (Thousand & Villa, 2005). Other change experts recommended creating a guiding coalition to engender new approaches (Kotter, 1996). To create a willing coalition across diverse institutional cultures, incentives were needed in addition to training for faculty. The PAFs used in the study included rewards factors in the form of *stipends, promotion and tenure, merit increases* and *release time*. Since patterns were not identified for any of these factors, the adoption of e-learning may be gradual within institutions and coalitions among administrators, and faculty may be uneasy about these workload changes.

Faculty members have also been concerned regarding intellectual property rights (Dalziel, 2003; Lipinzki, 2003; Wolcott, 2003), yet no patterns were identified in the study to indicate policy diffusion for this factor. With regard to faculty and institutional ownership issues, the law appears largely settled on the concept that materials created while in the employ of a college are the property of the college (Lipinski, 2003). However, use of copyrighted material in the distance education environment continues to encounter challenges that frustrate faculty members (Hardy & Bower, 2004; Lipinski, 2003). Despite the fact that intellectual property issues are complex, limited state-level, consortium, and institutional policy on such issues is likely to operate as a barrier to faculty willingness to adapt to online teaching (Lipinski, 2003; Wolcott, 2003).

Findings Regarding Students, Finding 6: Relationship Between Accreditation and Institutional Distance Education Policy

At consortium and institution levels, many patterns were identified in the data for the Students/Participants PAF with 100% of institutions documenting policies for several factors. Many of the PAF factors were derived from the *Interregional Guidelines for Electronically Offered Degree and Certificate Programs* (2nd ed.) (Middle States Commission on Higher

Education, 2002). Since the *Interregional Guidelines* document is an accreditation standard that cuts across all higher education institutions, the apparent high rate of policy diffusion in the Students and Participants category suggested a relationship between accreditation and institutional distance education policy regarding students.

Distance education grew at an annual rate of more than 18% from 2002 to 2006 (Allen & Seaman, 2006). Two-year institutions such as community colleges enrolled proportionately more students than other higher education institutions (Allen & Seaman, 2006). Students as consumers are demanding more flexibility and ease of access, and these demands have increased the use of technology-driven applications—a euphemism for online education (Levin, 2001). The high level of policy diffusion for student support at institutional levels indicated that 2-year institutions acknowledged student demands and market place realities.

Knowledgeable higher education leaders remarked upon the shift of universities into the marketplace, and they commented upon the requirement for higher education institutions to serve the needs of students in innovative, responsive ways (Bok, 2003; Duderstadt, 2000). Others commented on student behavior that reduced physical campus visits to near zero for many (Floyd & Casey-Powell, 2004). Therefore, student support for success was a critical component of online education in responding to the rapidly shifting technological landscape of the current and future post-secondary education arena.

The fourth component of the *Interregional Guidelines for Electronically Offered Degree and Certificate Programs* (2nd ed.) (Middle States Commission on Higher Education, 2002) is *Student Support*. This component acknowledges that the 21st century student is different from his predecessor, and these differences affect all aspects of the college student's experience. Institutions therefore may be expected to focus on students (Floyd & Casey-Powell, 2004).

Furthermore, since the *Interregional Guidelines* represented accreditation standards for Internet-mediated distance education and were promulgated by all six regional accreditation associations, they have the force of evaluation documents for institutions (Lezberg, 2003). As previously discussed, numerous authors on organizational performance management identified a strong correlation between evaluation measures and organizational behavior (Brown, 1996; Kaplan & Norton, 1996; Pfeffer & Sutton, 2006). Therefore, institutions' focus on students may be seen as an anticipated response.

Conclusions

The findings in this study suggested overall moderate diffusion of policy for Internet-mediated distance education in community colleges. A review of Table 5-1 indicates a moderate degree of overall policy diffusion across all levels for the entire 15-state sample. Overall policy diffusion in Management and Organization factors was moderate. Overall policy diffusion in Students and Participants factors was also moderate. Driven by extremely limited findings of faculty rewards and incentives, overall policy diffusion for the Faculty factors was low.

By levels, overall policy diffusion at state level was low, with the Management and Organization factor the only state-level contributor. At the consortium level, moderate policy diffusion was observed with all factors contributing and with the Students/Participants policy diffusion observed as high. Institutional-level policy diffusion was high, with only the Faculty factor observed as moderate.

While an overall moderate level of policy diffusion was observed, a clear overarching pattern of greater policy diffusion was observed as the level of analysis became closer to the student. Policy diffusion was therefore proportional to the policy organization's proximity to students. Institutions directly serve the student and were much more likely than other levels to have more complete Internet-mediated distance learning policy. Furthermore, the study disclosed

institutional-level student policy to be near unity, confirming this conclusion. Finally, this conclusion is congruent with other study findings and conclusions that state-level policy was focused on educational access and other high-level policy concerns, such as infrastructure, than on students. Figure 5-1 depicts this relationship in graphic form.

Conclusions Regarding Management and Organization Factors (Moderate Policy Diffusion)

These findings suggested a moderate degree of diffusion of policy in the form of statutory and formal guidance documents, such as strategic plans and budgets, and management and resource decisions for technology-mediated distance education at all three levels: state, consortium, and institution. States with well-developed statutory, strategic, and funding guidance also had more policy diffusion at other levels.

Regarding policies on curriculum and individual courses, institutions and consortia were focused on the accreditation standards illustrated in the *Interregional Guidelines for Electronically Offered Degree and Certificate Programs* (2nd ed.) (Middle States Commission on Higher Education, 2002). This apparent relationship between accreditation and institutional distance education policy supported a conclusion of moderate to high policy diffusion in the Management and Organization category at consortia and institutions. In this case, the proximity of consortia and institutions to students may be seen as a variable favoring policy diffusion.

All state consortia in the sample met the definition of a *virtual university/college consortium* as a nondegree granting collaborative relationship among accredited institutions that are linked online (Wolf & Johnstone, 1999). This finding suggested policy convergence at the consortium level (King & Mori, 2007). As discussed in Chapter 2, policy convergence occurs when many policy actors adopt the same approach to managing the same phenomenon.

All but one district and all individual institutions exhibited some degree of centralized control. This finding suggested policy convergence on the centralized model of distance education administration (Epper & Garn, 2004).

Conclusions Regarding Faculty Factors (Low Policy Diffusion)

Patterns were identified for faculty support (training and preparation) at consortium and institutional levels. This finding therefore suggested a high level of policy diffusion in faculty training and instructional quality in technology-mediated distance education at consortium and institutional levels. Since faculty serve at institutions, this finding is congruent with other findings regarding increased policy diffusion with proximity to students.

At state and consortium levels, no documents were found regarding faculty rewards (stipends, promotion and tenure, and merit increases) or faculty release time to learn about new technology. At the institution level, few policies were found in the *faculty rewards* or *release time* factors. Moreover, a lack of policy diffusion regarding intellectual property considerations and faculty adaptation of courses to the online modality was observed across all levels. Faculty members were reluctant to adopt Internet-mediated distance education (Allen & Seaman, 2006). This finding therefore suggested a relationship between state policy regarding faculty workload management, rewards and intellectual property considerations, and faculty willingness to engage in online education.

Conclusions Regarding Student/Participant Factors (High Policy Diffusion)

At consortium and institution levels, many patterns were identified in the data for the Students and Participants PAF with 100% of institutions documenting policies for several factors. Many of the PAF factors were derived from the *Interregional Guidelines for Electronically Offered Degree and Certificate Programs* (2nd ed.) (Middle States Commission on Higher Education, 2002). Institutions may be expected to comply with accreditation criteria

as measures of their performance (Brown, 1996; Kaplan & Norton, 1996; Lezberg, 2003; Pfeffer & Sutton, 2006). These findings and conclusions are congruent with the conclusion that Internet-mediated distance education policy diffusion was proportional to the level of analysis proximity to the student (Figure 5-1).

Analysis of Policy Transfer Mechanisms

As discussed in Chapter 2, coercion was held to be the fastest mechanism for policy diffusion (Rogers, 2003). Two types of coercion have been postulated: direct coercion and indirect coercive transfer (Dolowitz & Marsh, 1996). Regional accreditation standards are powerful forces for compliance for institutions, and failure to comply with accreditation guidelines may result in sanctions to institutions. Little doubt therefore occurs that the high diffusion of most policies at institutions is in direct response to perceived direct coercion. On the other hand, state-level distance education policy actors are not likely to feel coercion either directly or indirectly.

At state-level, policy transfer is much more likely to be voluntary in response to some perceived need (Dolowitz & Marsh, 1996; Knill, 2005; Rogers, 2003). Communication among various social system elements—in this case perhaps state directors of community colleges—might lead to emulation and voluntary adoption (Rogers, 2003). The perceived need for policy, the relative advantage of the policy itself, strength of interstate communications, time and perceived urgency, and the adopting state's social structure all influence the adoption decision (Rogers, 2003). Since voluntary adoption is the slowest policy transfer mechanism, the findings of low diffusion at state-level are consistent with theory (Rogers, 2003).

Since state-level Internet-mediated distance education policy actors are not subject to coercion by regional accreditation associations, the adoption of policy may remain at a slow pace (Dolowitz & Marsh, 1996; Knill, 2005; Rogers, 2003). The prevailing state cultural norms

regarding oversight of institutions may act as facilitators or as impediments, depending upon the state (Rogers, 2003). If the federal government adopts a more overarching set of policies for online learning, then it is possible that states' adoption of such policies would speed up.

Would a centralized system, either at federal or state-level, enhance student educational success in distance education? The question is difficult at best and merits further study. This study observed state-level strategic guidance to be centered on educational access, student success, and infrastructure. While educational access, student success and infrastructure are not necessarily competing goals (infrastructure fosters access, for example) the focus at federal and state levels would be less on the student and more on structure. Policy diffusion in this study was proportional to student proximity, and regional accreditation guidelines are already coercive in nature. Would a state-level or federal-level set of policies therefore decrease institutional flexibility and ultimately reduce the quality of student outcomes? Furthermore, the availability of Internet-mediated distance education has fostered a much more open market for higher education (Lezburg, 2003). Would federal oversight and guidance serve to stifle competition? On the other hand, such oversight may result in enhanced consistency which would respond to quality concerns (Allen & Seaman, 2006; Carnevale, 2007; Fogg, 2007).

Suggested Typology for State Community College Distance Education Consortia

Research in virtual universities and consortia has been limited (McCoy & Sorensen, 2003), and the term *consortium* has been used in distance education literature and in policy documents to mean a variety of arrangements among collaborative partners (Wolf & Johnstone, 1999). For the purposes of this study, a *virtual university/college consortium* is a nondegree granting collaborative relationship among accredited institutions that are linked online (Wolf & Johnstone, 1999).

All state consortia in the sample met the definition of a virtual university/college consortium (Wolf & Johnstone, 1999). However, the existing typologies for technology-mediated distance education consortia did not identify state-level relationships among distance education entities. Four such relationships were identified, and a new typology for state consortia was proposed.

Four types of distance education relationships were identified in the sample state community college distance education consortia. Table 5-2 suggests classifying online consortia along the dimension of the consortium's identity as a community college entity. Therefore, a Type I relationship indicates no state-level community college distance education consortium. Type II consortia are community-college specific, and Type III are intersegmental consortia, providing services across all educational levels, including primary and secondary schools. A Type IV relationship represents a virtual university with community college linkages, but no primary or secondary education institutions are represented. Table 5-2 classifies sample state consortia according to the suggested typology.

Suggested Typology for Institution and District-Level Distance Education Relationships

Within community college districts, varying degrees of centralized management and administration of distance education were observed from distributed to highly centralized operations (Epper & Garn, 2004). All but one district and all individual institutions exhibited some degree of centralized control. A typology was proposed to describe the various within-district distance education relationships.

Four types of distance education relationships were identified at the institutional and district levels. These relationships are described in the typology in Table 5-3. The typology was arranged to represent the levels of centralized control of distance education with Type I representing no district control (*distributed*) and Type IV representing highly centralized district

control of distance education programs (*centralized*). In centralized control models, the district provided both administrative and academic services. In distributed distance education models, the district hosted an online catalog and perhaps provided a portal for student entry, but individual institutions offered the service (Epper & Garn, 2004). These four types of distance education relations include:

- Individual community colleges not contained within a district are identified as Type I distance education institutions. Twelve sample institutions met Type I criteria.
- Type II distance education institutions report to districts but appear to exercise autonomy in administration of distance education programs. One sample district met Type II criteria.
- Type III distance education institutions report to a community college district and share distance education courses in a collaborative or consortium-type arrangement that results in distributed services (Epper & Garn, 2004). Two sample districts met Type III criteria.
- Type IV distance education institutions report to a community college district where distance education is managed in a centralized manner (Epper & Garn, 2004). Two sample districts met Type IV criteria.

Implications for Practice

States with strategic plans that addressed distance education appeared to have more policy diffusion at all levels. Therefore, state directors of community colleges may find it useful to include online education as a feature of existing strategic plans or to create independent strategic plans for distance education. State directors of community colleges may also find it useful to discuss voluntary adoption of successful policies from neighboring states, or they can at least open additional channels of communication to allow opportunities for policy transfer (Dolowitz & Marsh, 1996; Knill, 2005; Rogers, 2003).

Policy diffusion among factors regarding faculty was overall low, and this condition was largely driven by nearly zero findings of policy documentation regarding faculty rewards. Since faculty members were slow adopters of Internet-mediated distance education (Allen & Seaman,

2006), administrators may find it useful to identify suitable rewards for faculty to encourage professors to engage in online education.

With regard to the typologies of centralization of distance education, several institutions in the study had developed highly centralized management of distance education efforts. These institutions were classified as Type III and IV Distance Education Institutions. This approach is more in keeping with the theories of industrialization of distance education (Peters, 2003), and is useful in serving increasing numbers of online students (Allen & Seaman, 2006). Does such centralization benefit the student? Theories of interaction and communication (Moore & Kearsley, 2005) suggest high levels of faculty-student contact, which may be more compatible with decentralized models, as identified in Type 1 and II Distance Education Institutions. However, more contemporary theories, such as Anderson's systems models (2004), may offer a middle ground to administrators seeking a balance between low-cost and efficiency on the one hand and high social construction of knowledge opportunities on the other (Gunawardena & McIssac, 2004; Saba, 2003; Shaffer, 2005). Administrators may find it useful to evaluate distance education structures in light of the proposed typologies and these theories.

Issues for Further Study

State-level Policy Analysis Framework

Policy analysis frameworks (PAF), proposed by a variety of authors, have elements that appeared to be focused at institutional level (Berge, 1998; Gelman-Danley & Fetzner, 1998; King et al., 2000; Levy, 2003; Osika, 2006). While one PAF (Levy, 2003) included mission and vision elements, findings in this study suggested that strategic factors of educational access, student success, educational quality, and infrastructure have a larger place in PAF for Internet-mediated distance education. A more complete study of strategy and implementation in the online education environment would shed light on the viability of these two elements as factors

for wider policy analysis, and perhaps set the stage for more complete PAF that include statutory and strategic guidance as factors.

State Consortia Structures

This study identified four types of state-level consortium structure within the prevalent virtual university or consortium arrangements found in the sample (Epper & Garn, 2004). These types of structures were classified along the lines of community college identity. Analysts may find it useful to complete a study of state-consortia to show the extent of policy convergence for governance structures identified in the proposed typology for state community college distance education consortia.

Institutional-level Distance Education Governance Structures

This study identified four types of relationships at institution or district level. Proposed types were characterized by more centralized or less centralized control of distance education activities. Analysts may find utility in a study of institutional-level governance to classify the extent of policy convergence in district-level governance with regard to the proposed typology for institutions. Given increasing enrollments in distance education at community colleges, should institutions migrate more toward centralized management models?

Tuition, Fees, and Funding Formulas

The few examples of tuition and funding policy at all levels (particularly at state-level) suggested a need for further study. Few documents were identified at each level, but this nonpattern was inconsistent with brief mentions of distance education in budget or other community college funding documents. One state's analysis of distance education funding specifically recommended against a funding formula (Rogers, 2001). Additional study of community college distance education funding structures and budgets appears warranted.

Faculty Rewards and Workload Policy

The findings in this study suggested limited consideration at all levels for faculty workload management, compensation, and related factors such as release time. Analysts may wish to study community college faculty attitudes and distance education workload policies in more detail to understand the implications for adoption and success of Internet-mediated distance education in the wider community college system. Additionally, study of faculty attitudes toward distance education workloads may be helpful to administrators and faculty as they negotiate collective bargaining agreements. For example, future studies might examine which rewards and workload accommodations are most valued by faculty members, and the results of such a study could set the stage for productive negotiations between the parties.

Should the United States Adopt National Policy for Internet-mediated Distance Education?

This study examined policy at state, consortia and institutional levels through the lens of a policy analysis framework developed from regional accreditation guidelines. Lezburg (2003) observed that a *de facto* national standard for distance education existed in the form of the *Interregional Guidelines for Electronically Delivered Degree and Certificate Programs* (2nd ed.) (Middle States Commission on Higher Education, 2002). A study of national-level policy would answer the question: Is it in the best interest of the United States to go beyond the regional accreditation associations' guidelines and create a national-level policy regarding Internet-mediated distance education? Such a study would reveal the level of policy guidance on online education at a level above the ones analyzed in this study and would complete the picture of the policy system associated with U.S. distance education (Pacey & Keough, 2003). Such a study would also respond to several questions posed earlier regarding viability and desirability of more overarching policy.

Conclusion

The complex nature of Internet-mediated distance learning has burst upon the scene of higher education, particularly among community colleges (Allen & Seaman, 2006). Internet-mediated distance education was multi-dimensional (McCain & Jukes, 2001), and was characterized by a delivery system that emphasized anytime, anywhere learning as a feature (O'Banion, 1997). These seemingly innocuous features created challenges for administrators, faculty, and students (O'Banion, 1997).

In this study, policy diffusion was observed to be proportional to student proximity. The closer the institution was to the student, the more likely it was to have policy documents regarding Internet-mediated distance education. Moreover, institutional-level policy diffusion for students was near unity, suggesting that Internet-mediated distance education was moving toward a level of consistency among institutions. However, faculty rewards were largely ignored at all levels, with overall low policy diffusion in the faculty factors. This may be interpreted as setting the stage for faculty resistance to more complete implementation of Internet-mediated distance education (Allen & Seaman, 2006). States and institutions may find it advantageous to create more faculty rewards for engaging in teaching online.

State-level guidance was not consistent across states, and low policy diffusion across all factors was observed at state level. Since state-level policy actors were furthest from students, this finding reinforced the conclusion that policy diffusion was proportional to student proximity. This finding suggested that state directors of community colleges may need to reexamine statutory, strategic, and funding guidance to encourage more complete oversight of educational access, student success, infrastructure, and planning for Internet-mediated distance education.

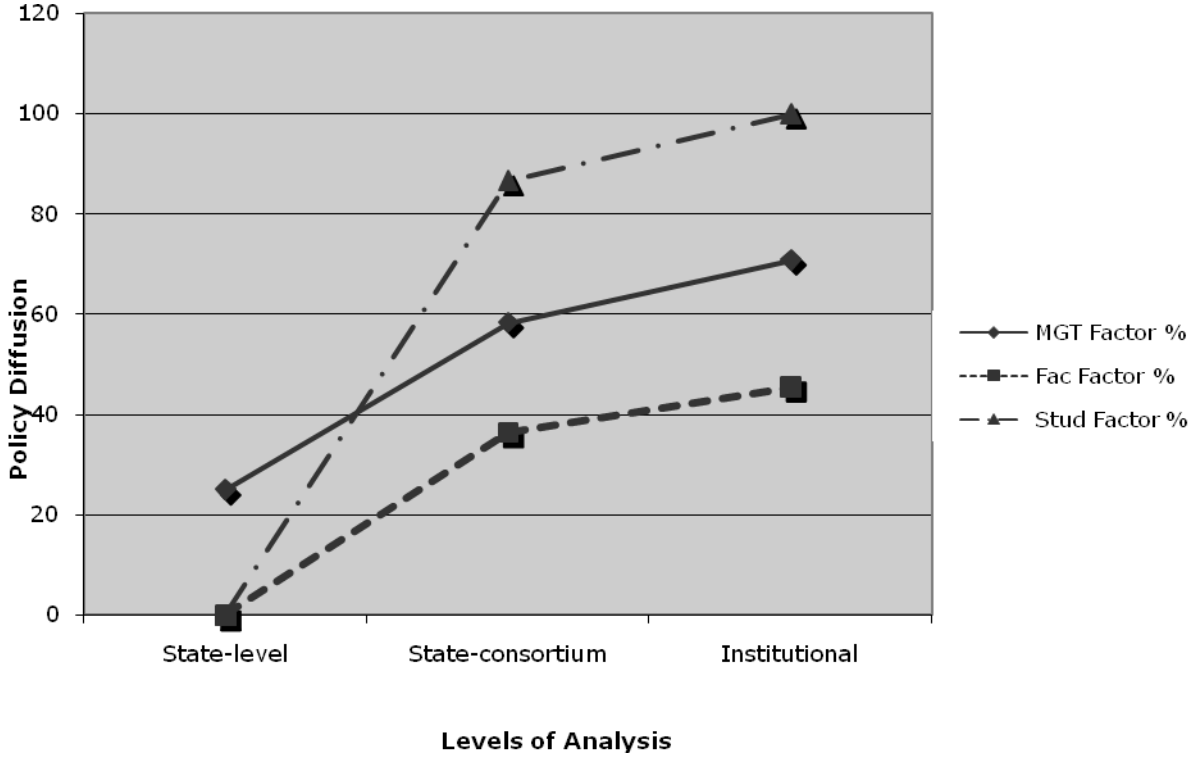

Figure 5-1. Policy diffusion by level and factor

Table 5-1. Policy diffusion by level and factor

Factors	Management and organization (24 total factors)			Faculty (11 total factors)			Students/Participant (15 total factors)			Total patterns identified (50 total factors)		
Level	Factors observed	%	Policy diffusion	Factors observed	%	Policy diffusion	Factors observed	%	Policy diffusion	Factors observed	%	Policy diffusion
State-level	6	25.00	Low	0	0.00	Low	0	0.00	Low	6	12.00	Low
State-consortium	14	58.33	Mod.	4	36.36	Mod.	13	86.67	High	31	62.00	Mod.
Institutional	17	70.83	High	5	45.45	Mod.	15	100.00	High	37	74.00	High
Whole System Totals and Percentages	37	51.39	Mod.	9	27.27	Low	28	62.22	Mod.	74	49.33	Mod.

Policy Diffusion Legend: Low: < 34%
Moderate: 34 – 68%
High: > 68%

Table 5-2. State community college online distance education consortia typology

Type	Description	States	Total
I	No distance learning consortium	Arizona, Missouri	2
II	Community college-specific consortium	California, Iowa, Michigan, North Carolina, Texas	5
III	Intersegmental university/community college consortium	Florida, Illinois, Kansas, Maryland, Ohio, Oregon, Washington	7
IV	State university with community college links	New York	1
		Total State Consortia	15

Table 5-3. Institution and district distance education typology

Type	Description	Institutions	Total in each category
I	Individual institution, no district.	Santa Fe CC, FL Moraine Valley CC, IL Kirkwood CC, IA Johnson County CC, KS Anne Arundel CC, MD Delta College, MI St. Louis CC, MO Monroe CC, NY Central Piedmont CC, NC Cuyahoga CC, OH Sinclair CC, OH Lane Community College, OR	12
II	Central community college district, but institutions have distance education autonomy	Foothill-De Anza CCD (CA)	1
III	District consortium arrangement—distributed services (Epper & Garn, 2004)	Maricopa CCD, AZ (1), Seattle CCD, WA	2
IV	Central community college district with centralized distance education (Epper & Garn, 2004)	San Diego CCD, CA; Dallas CCD, TX	2

APPENDIX A
ANALYSIS PROTOCOL

Table A-1. Content analysis protocol

State _____
Consortium_____
Institution_____

PAF Factor (King et al. 2000)	IRR Reference Code	Analysis factor. State, Consortium, or Institution Policy Attribute	State Level	State Document Codes	Consortium	Consortium Document Codes	Institution	Institution Document Codes	Remark
Management and Organization									
Tuition and fee structure	N/A	Addressed							
Funding formula	N/A	Addressed							
Collaboration									
With other Departments	1e	Internal organizational structure which enables the development, coordination, support, and oversight of electronically offered programs.							
Units	N/A	Organizational units addressed in policy documents.							
Institutions	1a	Program is consistent with the institution's role and mission.							

Table A-1. Continued

PAF Factor (King et al. 2000)	IRR Reference Code	Analysis factor. State, Consortium, or Institution Policy Attribute	State Level	State Document Codes	Consortium	Consortium Document Codes	Institution	Institution Document Codes	Remark
Institutions	1b	Intended student population, curriculum, modes or venue of instruction.							
Intra-and inter-institutional	1f	Articulation and transfer policies.							
Service areas	1j	Legal and regulatory requirements of the jurisdictions in which [the institution] operates.							
Resources									
Financial resources to support distance education	1c	Budgets and policy statements reflect commitment to the students.							
Financial resources to support distance education	4a	Commitment—administrative, financial, and technical—to continuation of the program for a period sufficient to enable all admitted students to complete a degree.							
Equipment	1d	Adequacy of technical and physical plant facilities.							

Table A-1. Continued

PAF Factor (King et al. 2000)	IRR Reference Code	Analysis factor. State, Consortium, or Institution Policy Attribute	State Level	State Document Codes	Consortium	Consortium Document Codes	Institution	Institution Document Codes	Remark
New technologies	1g	Consistent and coherent technical framework.							
New technologies	1h	Reasonable technical support.							
New technologies	1i	Technology appropriate to students and curriculum.							
Curricula/ individual courses									
Delivery modes	2e	Appropriate interaction (synchronous or asynchronous) between instructor and students and among students is reflected in the design of the program.							
Course/program selection	2b	Substance of the program, including its presentation, management, and assessment are the responsibility of people with appropriate academic qualifications.							

Table A-1. Continued

PAF Factor (King et al. 2000)	IRR Reference Code	Analysis factor. State, Consortium, or Institution Policy Attribute	State Level	State Document Codes	Consortium	Consortium Document Codes	Institution	Institution Document Codes	Remark
Plans to develop	2c	Coherent plan for the student to access all courses necessary.							
Curricula/ individual courses									
Individual sequences	2c	Coherent plan for the student to access all courses necessary.							
Course development	2b	Academic qualifications of those responsible for curricular decisions, assessment, and program oversight.							
Entire program delivery	2a	The electronically offered degree or certificate program is coherent and complete.							
PAF Factor (King et al. 2000)	IRR Reference Code	Analysis factor. State, Consortium, or Institution Policy Attribute	State Level	State Document Codes	Consortium	Consortium Document Codes	Institution	Institution Document Codes	Remark

Table A-1. Continued

PAF Factor (King et al. 2000)	IRR Reference Code	Analysis factor. State, Consortium, or Institution Policy Attribute	State Level	State Document Codes	Consortium	Consortium Document Codes	Institution	Institution Document Codes	Remark
Interactivity requirements	2e	Importance of appropriate interaction (synchronous or asynchronous) between instructor and students and among students is reflected in the design of the program and its courses, and in the technical facilities and services provided.							
Curricula /individual courses									
Test requirements	5a	Assessment of student achievement is conducted in each course.							

Table A-1. Continued

PAF Factor (King et al. 2000)	IRR Reference Code	Analysis factor. State, Consortium, or Institution Policy Attribute	State Level	State Document Codes	Consortium	Consortium Document Codes	Institution	Institution Document Codes	Remark
Test requirements	5b	Examinations are employed (paper, online, demonstrations of competency), they take place in circumstances that include firm student identification. The institution otherwise seeks to assure the integrity of student work.							
Contact hour definitions	N/A	Online contact hours are defined.							
Faculty (including Continuing Education and Cooperative Extension) Rewards									
Stipends	3a	The institution and its participating faculty have considered issues of workload, compensation.							
Promotion and tenure	3a	The institution and its participating faculty have considered issues of workload, compensation.							

Table A-1. Continued

PAF Factor (King et al. 2000)	IRR Reference Code	Analysis factor. State, Consortium, or Institution Policy Attribute	State Level	State Document Codes	Consortium	Consortium Document Codes	Institution	Institution Document Codes	Remark
Merit increases	3a	The institution and its participating faculty have considered issues of workload, compensation.							
Support									
Student help	3d	Provides orientation and training including strategies for effective interaction.							
Technical assistance	2d	Technical support services, including help desk services.							
Training	3b	Ongoing program of appropriate technical, design, and production support for participating faculty members.							
	1e	Provide training and support.							

Table A-1. Continued

PAF Factor (King et al. 2000)	IRR Reference Code	Analysis factor. State, Consortium, or Institution Policy Attribute	State Level	State Document Codes	Consortium	Consortium Document Codes	Institution	Institution Document Codes	Remark
Opportunities to learn about technology and new applications									
Release time	3a	Institution and its participating faculty have considered issues of workload, compensation, ownership of intellectual property.							
Training	3c	Provides to those responsible for program development orientation and training.							
Intellectual property									
Copyright	1e	Copyright law.							
	3a	Institution and its participating faculty have considered issues of intellectual property.							
Students/Participants									
Support									
Access to technology	2d	Course management and technology.							
	2d	Technical services.							
	4c	Ongoing technical support.							

Table A-1. Continued

PAF Factor (King et al. 2000)	IRR Reference Code	Analysis factor. State, Consortium, or Institution Policy Attribute	State Level	State Document Codes	Consortium	Consortium Document Codes	Institution	Institution Document Codes	Remark
Library resources	2d	Library-related services are available.							
	4c	Library resources.							
Registration	2d	Registration, student records.							
	4c	Accurate and timely information about the institution.							
	4c	Application for admission.							
	4c	Enrollment/registration in programs and courses.							
Advising	2d	Orientation, advising, counseling, tutoring.							
	4c	Services must be available for students of electronically offered programs pre-registration advising, academic advising.							

Table A-1. Continued

PAF Factor (King et al. 2000)	IRR Reference Code	Analysis factor. State, Consortium, or Institution Policy Attribute	State Level	State Document Codes	Consortium	Consortium Document Codes	Institution	Institution Document Codes	Remark
Financial aid	4c	Financial aid, including information about policies and limitations, information about available scholarships, processing of applications, and administration of financial aid and scholarship awards.							
Requirements and records									
Residency requirements	4b	Registration.							
Acceptance of courses from other places	1f	Articulation and transfer policies the institution judges courses and programs on their learning outcomes, and the resources brought to bear for their achievement, not on modes of delivery.							

Table A-1. Continued

PAF Factor (King et al. 2000)	IRR Reference Code	Analysis factor. State, Consortium, or Institution Policy Attribute	State Level	State Document Codes	Consortium	Consortium Document Codes	Institution	Institution Document Codes	Remark
Transfer of credit	1f	Articulation and transfer policies the institution judges courses and programs on their learning outcomes, and the resources brought to bear for their achievement, not on modes of delivery.							

APPENDIX B
DOCUMENTS EXAMINED IN THE STUDY

Table B-1. States, institutions, document codes and documents reviewed

State and institution	Protocol		Documents	
Arizona	A		Title	Location URL
state and consortium level	A100	01	Community college courses; intergovernmental agreement, 15 A.R.S. Sec. 1470 (2007).	
	A100	02	Correspondence and extension courses, 15 A.R.S. Sec. 1606 (2007).	
	A100	04	Arizona Community Colleges. (2003). *Fiscal 2003 appropriations report.* A.R.S. § 15-1424.	
Maricopa community college district	A110	01	Maricopa Community Colleges. (2007). Maricopa Community Colleges Strategic plan: Operational plans FY2007-08.	N/A
	A110	02	Maricopa Community Colleges. (2006). *Maricopa Online.*	https://student1.dist.maricopa.edu/mccdhome.htm
	A110	03	Maricopa CCD Blackboard LMS Faculty/Staff Resources Page	http://www.maricopa.edu/blackboard/resourcesFaculty.html
	A110	04	Maricopa Faculty Online Blackboard Support Page	http://help.perceptis.com/maricopa/index.php
	A110	05	Maricopa CCD Blackboard LMS Video Demos	http://www.maricopa.edu/blackboard/Movies/menu.htm
	A110	06	Maricopa CCD Oline library support:	http://library.maricopa.edu/
	A110	07	Maricopa CCD Center for Learning and Instruction	http://www.mcli.dist.maricopa.edu/
	A110	08	Maricopa CCD Faculty Link to Teaching and Learning on the Web	http://www.mcli.dist.maricopa.edu/tl/index.html
	A110	09	Maricopa Technology Group - Ocotillo	http://www.mcli.dist.maricopa.edu/ocotillo/index.php
	A110	10	Maricopa Community Colleges. (2007). Adopted budget, fiscal year 2007-08. Retrieved September 3, 2007, from http://www.maricopa.edu/business/budget/adoptbgt.htm	http://www.maricopa.edu/business/budget/fy08bgt/fy08adoptbgt.pdf

Table B-1. Continued

State and institution	Protocol		Documents	
	A110	11	Maricopa Community College District. (2007). *About us: Demographics*. Retrieved August 30, 2007, from http://www.maricopa.edu/about/index.php	
	A110	12	Distance Learning: A Two-Semester Program	http://ctl.mc.maricopa.edu/_programs/dlmg/index.html
	A110	13	Office of General Counsel. (2007).Intellectual property: Copyright guidelines.	http://www.maricopa.edu/legal/ip/guidelines/distance.htm
	A110	14	Maricopa Community College District. (2007).Getting Started. Retrieved August 30, 2007, from http://www.maricopa.edu/about/index.php	
	A110	15	Maricopa Community College District. (n.d.). National Center for Teacher Education. Retrieved September 20, 2007, from http://www.maricopa.edu/academic/teachered/Resources.html	http://www.maricopa.edu/academic/teachered/Resources.html
Chandler-Gilbert Community College	A111	01	Chandler Gilbert Community College. (2007). E-learning	http://webport.cgc.maricopa.edu/published/e/le/elearning/home/1/?__s=nf-20070919064237-10310
Estrella Mountain Community College	A112	01	Estrella Mountain Community College. (2005). Center for Teaching and Learning: E-Learning.	http://www.estrellamountain.edu/ctl/el_index.asp
Gateway Community College	A113	01	Gateway Community College. (n.d.). Online Learning.	http://distance.gatewaycc.edu/
	A113	02	Gateway Community College. (n.d.). Center for Teaching and Learning.	http://public.gatewaycc.edu/sites/ctl/default.aspx

Table B-1. Continued

State and institution	Protocol		Documents	
Glendale Community College	A114	01	Glendale Community College. (n.d.). eCourses: Online, hybrid, open-entry.	http://www.gc.maricopa.edu/online/
Mesa Community College	A115	01	Mesa Community College Strategic Plan 2005-2008.	
	A115	02	Report of the comprehensive visit to Mesa Community College: Advancement section (2005). The Higher Learning Commission of the North Centeral Association of Colleges and Schools.	
	A115	03	DeSoto, M. (2003). *Quality in distance learning.*	http://glory.gc.maricopa.edu/~mdesoto/quality/index.htm
Paradise Valley Community College	A116	01	Paradise Valley Community College (2006). *Adjunct Faculty Handbook.* Phoenix, AZ: Paradise Valley Community College.	
	A116	02	Paradise Valley Community College (2007). Choices at PVC: Center for Distance Learning.	http://www.pvc.maricopa.edu/choices/
Phoenix College	A117	01	Phoenix College. (2007). PC Online.	http://www.pc.maricopa.edu/departments/ltd/new/pconline.php
	A117	02	Phoenix College. (2007). Learning, Technologies and Development.	http://www.pc.maricopa.edu/departments/ltd/training/training.php
Rio Salado College	A118	01	Rio Salado College Online. (2007). College description.	http://www.riosalado.edu/ci/college_desc.shtml
	A118	02	Rio Salado College Online. (2007). Current Students.	http://www.riosalado.edu/current/
Scottsdale Community College	A119	01	Scottsdale Community College. (2006). SCC E-learning Courses.	http://www.scottsdalecc.edu/online/index.html

Table B-1. Continued

State and institution	Protocol		Documents	
South Mountain Community College	A120	01	South Mountain Community College. (2007). *Other academic areas: Online courses.*	http://academics.southmountaincc.edu/courses/onlinecourses/
California	B		Title	Location URL
State and consortium level	B100	01	Legislative findings and declarations; Intersegmental working group; Guiding principles, 3 Cal Ed Code § 66941 (2007).	
	B100	02	The California Community Colleges System Strategic Plan Steering Committee. (2006). *California community colleges system strategic plan.* Sacramento, CA: The California Community Colleges Board of Governors.	N/A
	B100	04	California Community Colleges Systems Office. (2006a). 2007-08 System budget proposal.	
	B100	05	California Community Colleges Systems Office. (2006b). SB 361(Scott)/Community Colleges Funding Formula Reform.	
	B100	06	California Virtual Campus	http://www.cvc.edu/
	B100	07	California Virtual Campus. (n.d.). CVC Course Catalog.	http://www.cvc.edu/students/courses
	B100	08	California Virtual Campus. (n.d.). Faculty.	http://www.cvc.edu/faculty/
	B100	10	Educational Services Division. (2004). *Distance education guidelines* (2nd ed.). Academic Affairs and Instructional Resources Unit, Chancellor's Office, California Community Colleges.	
Foothill-De Anza Community College District	B110	01	Foothill-De Anza Community College District Board of Trustees. (2005). Educational master plan 2005-2015. Los Altos Hills, CA: Foothill-De Anza Community College.	

Table B-1. Continued

State and institution	Protocol		Documents	
	B110	02	Educational Technology Advisory Committee. (n.d.). Information technology strategic plan 2005-2010. Los Altos Hills, CA: Foothill-De Anza Community College District.	
	B110	03	Foothill-De Anza Community College District. (2007). *Welcome: Mission.* Retrieved August 30, 2007, from http://www.fhda.edu/about_us/	
De Anza College	B111	01	De Anza College. (2007). Distance Learning Center.	Retrieved August 20, 2007, from http:/distance.deanza.edu/index.shtml
	B111	02	De Anza College. (2007). De Anza College Main Page.	Retrieved August 20, 2007, from http://www.deanza.edu/
Foothill College	B112	01	Foothill's Leadership in Online Learning. (2007). Etudes Consortium Project: Leadership in Online Instruction	http://www.foothill.edu/news/fh-etudesng.html
	B112	02	Student Code of Conduct for ETUDES - Internet Based Courses	Retrieved August 20, 2007, from http://www.foothill.edu/services/honorint.html
	B112	03	Foothill Community College. (2007). Virtual Campus Center.	Retrieved August 20, 2007, from http://www.foothill.edu/vcc/
	B112	04	Apodaca, M., Chenoweth, M., Franco, S., Garrido, D, Noone, L., & Thomas, L. (2006). *Foothill College Classified Handbook 2006-2007.*	
	B112	05	Foothill Community College. (2007). *Welcome to Foothill Global Access (FGA)!*	Retrieved August 20, 2007, from http://www.foothillglobalaccess.org/
	B112	06	Foothill Community College. (2007). Foothill Global Access: Faculty Center.	http:/www.foothillglobalaccess.org/main/faculty_center.htm
	B112	07	Foothill College. (2003). Curriculum development handbook.	http://www.foothill.edu/staff/curriculum/Curr_Main_Handbook.pdf
San Diego community college district	B120	01	Educational Master Plan 2000-2005	http://www.sdccd.edu/public/district/masterplan.html

Table B-1. Continued

State and institution	Protocol		Documents	
	B120	02	San Diego Community College District. (2007). Mission and goals.	Retrieved June 15, 2007, from http://www.sdccd.edu/public/district/mission.html
	B120	03	San Diego Community College District. (2007). Principles and priorities.	Retrieved September 12, 2007, from http://www.sdccd.edu/public/district/masterplan.html
	B120	04	San Diego Community College District. (2007). Online learning pathways.	Retrieved September 12, 2007, from http://www.sdccdonline.net/
	B120	05	San Diego Community College District. (2007). Procedure 5300.2. Courses of instruction and educational program approval.	Retrieved September 12, 2007, from http://instsrv.sdccd.edu/policiesframe.htm
	B120	06	Office of Institutional Research. (2004). Fact Book. San Diego, CA: San Diego Community College District.	
San Diego City College	B120	07	San Diego Community College District. (2007). San Diego Community College District Main Web Page.	http://www.sdccd.edu/
San Diego Mesa College	B121	01	San Diego City College. (2004). Master Plan Update 2004-2005	http://www.sdcity.edu/mp/PDF/MasterPlanInternet2004-2005.pdf
San Diego Miramar College	B122	01	San Diego Mesa College. (2006). Five year educational master plan 2006-07 to 2010-2011	http://www.sdmesa.edu/educational-master-planning/pdf/Educational-Master-Plan-Outline.pdf
	B123	01	San Diego Miramar College. (2006). Strategic Plan	http://www.miramar.sdccd.cc.ca.us/depts/president/strategicplan/2006%20Strategic%20Plan.doc
	B123	02	San Diego Community College. (2003). SDCCD Online Handbook.	Retrieved June 15, 2007, from http://www.miramar.sdccd.net/depts/pdc/SDCCDonline/outline.htm
Florida	C		Title	Location URL
State and Consortium Level	C100	01	Distance learning duties, 48 Fla. Stat. § 1001.28 (2007).	

Table B-1. Continued

State and institution	Protocol		Documents	
	C100	02	Definitions, 48 Fla. Stat. § 1005.02 (2007)	
	C100	03	Florida Community Colleges and Workforce Education. (2005) "Delivering the dream:" Division of community colleges and workforce education strategic plan 2005. Tallahassee, FL: Department of Education	
	C100	04	Florida Distance Learning Consortium.	http://www.distancelearn.org/mainPage.cfm
	C100	05	Florida Distance Learning Consortium. Administrative Page.	http://www.fldlc.org/
	C111	06	Policy and budget recommendations fiscal year 2007-08: Community college programs (Florida). Retrieved September 6, 2007, from http://peoplesbudget.state.fl.us/BDServiceDetail.aspx?PolicyID=&Policy Level=&ServiceID=48400600	
Santa Fe Community College	C111	01	Santa Fe Community College. (2007). *Mission and goals.*	Retrieved July 24, 2007, from http://www.sfcc.edu
	C111	02	Santa Fe Community College Open Campus Portal. (2007).	http:/www2.sfcc.edu/~OpenCampus/index.htm
	C111	03	Santa Fe Community College. (2007). *Welcome to the open campus.*	http:/www2.sfcc.edu/%7EOpenCampus/visitor.htm
	C111	04	Santa Fe Community College. (2007). *Open campus: Student services.*	http://www2.sfcc.edu/%7EOpenCampus/studserv.htm
	C111	05	Santa Fe Community College. (2007). *Online Faculty Teaching Excellence Network.*	http://inst.sfcc.edu/~often/index.htm
	C111	06	Santa Fe Community College. (2007). *Academic resources.*	http:/inst.sfcc.edu/~often/ar_index/ar_index.htm
	C111	07	Santa Fe Community College. (2007). *Center for academic technologies.*	http://cisit.sfcc.edu/%7Ecat/INDEX.HTM

Table B-1. Continued

State and institution	Protocol		Documents	
	C111	08	Santa Fe Community College. (2007). *Educational media.*	http://cisit.sfcc.edu/%7Eedumedia/distlearn/index.htm
	C111	09	Santa Fe Community College. (2007). *Current data for closing Fall 2005.* Retrieved August 30, 2007, from http://admin.sfcc.edu/~ir/factbook.htm	
	C111	10	Santa Fe Community College. (n.d.). Main Web Page.	http://www.sfcc.edu/
	C111	11	Santa Fe Community College. (n.d.). Lawrence W. Tyree Library, Santa Fe Community College: Distance Learning.	http://cisit.sfcc.edu/~library/distance.htm
Illinois	D		Title	Location URL
State and Consortium Level	D100	01	Definitions. 105 ILCS 425/1 (2006) [Prior to 1/1/93 cited as: Ill. Rev. Stat., Ch. 144, para. 136]	
	D100	02	HIGHER EDUCATION (110 ILCS 805/) Public Community College Act.	no reference to de or elearning
	D100	03	Illinois Community College Board. (n.d.). *2005-2006 Biennial report.* Springfield, IL: Illinois Community College Board.	
	D100	04	Illinois Community College Board. (2006). *Administrative rules.* Springfield, IL: Illinois Community College Board.	
	D100	05	Holohan, R., Fischbach, R. Fisher, R. Campbell, T. & Rohr, T. (2005). *ILCCO Research report 2005: Quality, retention and expansion of online courses and programs in Illinois community colleges.* Illinois Community Colleges Online. Retrieved August 20, 2007, from http://www.ilcco.net/ILCCO/index.cfm?page=Resources.	
	D100	06	Illinois Community Colleges Online (ILCCO). (2004). *Consortium main page.*	http://www.ilcco.net/ILCCO/index.cfm
	D100	07	e-learning in Illinois	http://elearning.illinois.net/

Table B-1. Continued

State and institution	Protocol		Documents	
	D100	08	State of Illinois. (2007). *E-learning in Illinois.*	http://www.illinois.gov/learning/elearning.cfm
	D100	09	Illinois virtual campus	http://www.ivc.illinois.edu/
	D100	10	Illinois Community College Board. (2007). Fiscal Year 2008 Illinois tech prep consortium grant guidelines. Springfield, IL: Illinois Community College Board.	
	D100	11	Illinois state budget, fiscal year 2008. Retrieved September 6, 2007, from http://www.state.il.us/budget/FY08%20Operating%20Budget.pdf	
	D100	12	Consortium of Academic and Research Libraries in Illinois (CARLI). 2007). Main Webpage.	http://www.carli.illinois.edu/
Morane Valley Community College	D111	01	Moraine Valley Community College. (2005). *Strategic Priorities.* Retrieved July 24, 2007, from http://www.morainevalley.edu/gen_info/strategic.html	http://www.morainevalley.edu/gen_info/strategic.html
	D111	02	Moraine Valley Community College. (2007). *Academic Quality Improvement Program (AQIP).* Retrieved July 24, 2007, from http://www.morainevalley.edu/AQIP/action_projects.htm	http://www.morainevalley.edu/AQIP/action_projects.htm
	D111	03	Moraine Valley Community College. (2007). *Alternative Learning*	http://www.morainevalley.edu/AlternativeLearning/
	D111	04	Moraine Valley Community College. (2007). *E-learning.*	http://my.morainevalley.edu/webapps/portal/frameset.jsp
	D111	05	Moraine Valley Community College. (2007). Online general information.	http://www.morainevalley.edu/academics/exam.html
	D111	06	Moraine Valley Community College. (2007). Student support.	http://my.morainevalley.edu/webapps/portal/frameset.jsp?tab_id=_10_1
	D111	07	Moraine Valley Community College. (2007). *Faculty support (Center for Teaching and Learning)*	http://www.morainevalley.edu/CTL/resources.htm

Table B-1. Continued

State and institution	Protocol		Documents	
	D111	08	Moraine Valley Community College. (2007). Facts and Figures, 2005. Retrieved August 30, 2007, from http:/www.morainevalley.edu/gen_info/facts.html	
	D111	09	Moraine Valley Community College. (2006). Comprehensive annual financial report, fiscal years 2005 – 2006.	
	D111	10	Moraine Valley Community College. (2007). Home Page.	http://www.morainevalley.edu/default.asp
	D111	11	Moraine Valley Community College. (2007). Library/Learning Resources Center: Services for Faculty.	http://www.morainevalley.edu/lrc/instructionform_display.asp
Iowa	E		Title	Location URL
State and Consortium Level	E100	01	Division of Community Colleges and Workforce Preparation. (2006). *Shaping the future: Five-year plan for the community colleges of Iowa 2006-2111.* Des Moines, IA: Iowa Department of Education.	N/A
	E100	02	Bureau of Community Colleges and Career and Technical Education. (2005). *Instructions for submitting program approval requests, Community college programs. Des Moines, IA: State of Iowa, Department of Education*	
	E100	03	Iowa Community College Online Consortium	http://www.iowacconline.org/
	E100	04	Division of Community Colleges and Workforce Preparation. (2006). Iowa community colleges fiscal year 2007 certified budgets. Des Moines, IA: Iowa Department of Education.	
	E100	05	Iowa Department of Education. (2006). *Details for Minimum Faculty Standards.*	Retrieved August 20, 2007, from http://www.iowa.gov/educate/component/option,com_docman/task,doc_details/gid,213/Itemid,55/

Table B-1. Continued

State and institution	Protocol		Documents	
Kirkwood Community College	E111	01	Kirkwood Community College (2005). *2005-2006 Strategic goals: Distance learning five year vision.* Retrieved July 24, 2007, from http://www.kirkwood.edu/pdf/uploaded/643/distance_learning.pdf	http://www.kirkwood.edu/pdf/uploaded/643/distance_learning.pdf
	E111	02	Distance Learning Student Resources	http://www.kirkwood.edu/site/index.php?p=3659
	E111	03	Advising and Transfer Center	http://www.kirkwood.edu/advising/
	E111	04	Kirkwood Community College Distance Learning. (2006).	http://www.kirkwood.edu/distancelearning
	E111	05	Kirkwood CC Distance Learning Costs and Policies. (2006).	http://www.kirkwood.edu/site/index.php?p=10018
	E111	06	Kirkwood Faculty and Staff Policies. (2006).	http://www.kirkwood.edu/facultystaff.php
	E111	07	Kirkwood Community College Board Policy Manual	http://www.kirkwood.edu/board/policies/
	E111	08	612 - Educations Programs	http://www.kirkwood.edu/site/index.php?d=194&p=2117&t=2
	E111	09	Kirkwood Community College Board Policy 675 - Development of Copyrightable Materials and Media by the KCC Personnel	http://www.kirkwood.edu/site/index.php?d=194&p=2119&t=2
	E111	10	Kirkwood Community College Distance Learning Instructor Resources. (2006).	http://www.kirkwood.edu/site/index.php?p=10099
	E111	11	Kirkwood Community College Distance Education Instructor Resources. (2006). ATAW Course Design Guideline	http://www.kirkwood.edu/pdf/uploaded/134/atawcoursedesignguideline.pdf
	E111	12	Kirkwood Community College. (2007). *Enrollment 2006-7.* Retrieved August 30, 2007, from http://www.kirkwood.edu/site/index.php?d=589	

Table B-1. Continued

State and institution	Protocol		Documents	
	E111	13	Kirkwood Community College (2006). Main Webpage. Retrieved August 30, 2007, from http://www.kirkwood.edu/	
Kansas	F		Title	Location URL
State and Consortium Level	F100	01	Definitions. K.S.A. § 74-32,163 (2006)	http://www.kslegislature.org/legsrv-statutes
	F100	02	State Boards, Commissions and Authorities,74 K.S.A. § 74-3202c (2006).	http://www.kslegislature.org/legsrv-statutes
	F100	03	Kansas Board of Regents. (1995). *Policy and procedures manual.* Topeka, KS: Kansas Board of Regents.	http://www.kansasregents.org/download/aca_affairs/policymanual/policymanual.pdf
	F100	04	Kansas Board of Regents. (2000). *Kansas four-year state plan: Adult education and family literacy.* Topeka, KS: Kansas Board of Regents.	
	F100	05	Distance education means any course delivered primarily by use of correspondence study, audio, video or computer technologies.	retrieved July 24, 2007, from http://www.kansasregents.org/KANDL/index.html
	F100	06	Kansas Digital Learning (KANDL) Advisory Council for Higher Education. (2004).	Retrieved July 24, 2007, from http://www.kansasregents.org/download/kandl/KansasDigitalLearning.pdf
	F100	07	Welcome to Kan-ed. (2004). Topeka, KS: Kansas Board of Regents.	Retrieved July 24, 2007, from http://www.kan-ed.org/index.htm
	F100	08	Kan-ed. (2006). Annual report 2006. Retrieved September 12, 2007, from http://www.kan-ed.org.	
	F100	09	Kansas Board of Regents. (2000). A plan for coordination of Kansas postsecondary education. Retrieved August 1, 2007, from http://www.kansasregents.org/download/agency/coordination.pdf	http://www.kansasregents.org/download/agency/coordination.pdf

Table B-1. Continued

State and institution	Protocol		Documents	
	F100	10	Kansas Board of Regents. (2003). *Kansas Digital Learning.*	http://www.kansasregents.org/KANDL/index.html
	F100	11	Kansas Board of Regents. Unified operating budget request for higher education, FY 2007. Retrieved August 30, 2007, from http://www.kansasregents.org/download/Finance/Unified%20Budget%20Document%20FY%202007%20webpage.pdf	
	F100	12	COMMUNITY COLLEGES K.A.R. § 88-26-4 (2006) 88-26-4. Credit.	
Johnson County Community College	F111	01	Strategic Planning Council. (2006). *Johnson County Community College strategic plan assessment matrix FY 07.*	Retrieved August 1, 2007, from http://www.jccc.net/home/download/14921/OperationalPlan.pdf
	F111	02	Johnson County Community College. (2006). *Distance learning at JCCC.*	Retrieved July 24, 2007, from http://web.jccc.net/academic/dl/
	F111	03	Johnson County Community College. (2006). *Distance learning policies.*	Retrieved July 24, 2007, from http://web.jccc.net/academic/dl/policies.htm
	F111	04	Johnson County Community College. (2006). *Mission of the distance learning coordinating council.*	Retrieved July 24, 2007, from http://web.jccc.edu/dlcc/
	F111	05	Johnson County Community College. (2007). *Friends and Visitors*. Retrieved August 30, 2007, from http://www.jccc.net/home/groups.php?which=5	
	F111	06	Johnson County Community College. (2006). Current Students.	http://www.jccc.edu/home/groups.php?which=2
	F111	07	Johnson County Community College. (2007). CTL Distance Learning Mentor / Coordinator	http://web.jccc.net/academic/ctl/faculty_support/distance_learning.html#Distance_Learning_Resources

Table B-1. Continued

State and institution	Protocol		Documents	
	F111	08	Johnson County Community College. (2007). Distance learning testing.	http://www.jccc.net/home/depts.php/5302/site/dl
	F111	09	Johnson County Community College. (2006). Distance learning coordinating council: Handouts, checklists and general documents.	http://web.jccc.edu/dlcc/resources/index.html
	F111	10	Johnson County Community College. (2006). Series 400: Personnel, Section 422 .11 Copyrights and patents.	http://www.jccc.net/home/depts.php/1102/site/facultyresources/toc_faculty_handbook/toc_hr_policies/422.11_copyrights_patents
	F111	11	Johnson County Community College. (2001). Distance learning development process.	http://web.jccc.net/edtech/projects/instructions.pdf
Maryland	G		Title	Location URL
State and Consortium Level	G100	01	Maryland Higher Education Commission. (2004). *Maryland state plan for post secondary education.* Annapolis, MD: MHEC.	http://www.mhec.state.md.us/higherEd/2004Plan/2004StatePlan.asp
	G100	02	Maryland Online. (2007). *Welcome to Maryland Online.*	http://www.marylandonline.org/
	G100	03	Maryland Online. (2007). Mission and vision.	http://www.marylandonline.org/about/vision_mission
	G100	04	Maryland Online. (2007). *Students.*	http://www.marylandonline.org/students
	G100	05	Maryland Online. (2007). *Faculty.*	http://www.marylandonline.org/faculty/resources
	G100	06	Filipp, L. (2005). *Distance learning at Maryland colleges and universities, Academic year 2003-2004.* Annapolis, MD: Maryland Higher Education Commission. Summary of Operating Budget Appropriations for the Fiscal Year Ending June 30, 2008. (Maryland). Retrieved September 6, 2007, from http://dbm.maryland.gov/dbm_publishing/public_content/dbm_search/budget/toc_fy2008_fiscal_digest/fisdig08exc.pdf	

Table B-1. Continued

State and institution	Protocol		Documents	
Anne Arundel Community College	G111	01	Anne Arundel Community College. (2006). Continuum: Anne Arundel Community College Strategic Plan 2006 – 2115. Arnold, MD: Anne Arundel Community College.	http://www.aacc.edu/aboutaacc/file/AACCStrategicPlan.pdf
	G111	02	Anne Arundel Community College. (2007). Distance learning at AACC.	http://www.aacc.edu/distancelearning/
	G111	03	Anne Arundel Community College. (2007). Progressive technology at AACC.	http://www.aacc.edu/technology/
	G111	04	Anne Arundel Community College. (2007). *Truxal library - for distance learners.*	http://www.aacc.edu/library/DLResources.cfm
	G111	05	Anne Arundel Community College. (2007). AAAC Policies.	http://www.aacc.edu/aboutaacc/policies.cfm
	G111	06	Anne Arundel Community College. (2007). *Enrollment Statistics and Student Profile; Credit FY 2005 Enrollment in headcount.* Retrieved August 30, 2007, from http://www.aacc.edu/aboutaacc/enrollmentstats.cfm	
	G111	07	Anne Arundel Community College. (2006). Student services at AACC.	http://www.aacc.edu/studentservices/
Michigan	H		Title	Location URL
State and Consortium Level	H100	01	Strategic Planning Committee. (2007). M*ichigan Community College Association 2007-2010 strategic plan.* Lansing, MI: MCCA.	
	H100	02	Michigan Community College Association. (2007). *Virtual learning collaborative.*	http://vcampus.mccvlc.org/index.asp
	H100	03	Michigan Community College Network. (n.d.).	http://www.michigancc.net/mccdeci/
	H100	04	FY 2007-08 Community colleges budget. (Michigan). Retrieved September 5, 2007, from http://www.senate.michigan.gov/sfa	

Table B-1. Continued

State and institution	Protocol		Documents	
Delta College	H111	01	Delta College. (2006). *Delta College 2006-2010 strategic plan.* Retrieved August 3, 2007, from www.delta.edu/aqip/attachments/DeltaCollege20062010Strategic%20Plan%20December122006.doc	www.delta.edu/aqip/attachments/DeltaCollege20062010Strategic%20Plan%20December122006.doc
	H111	02	Delta College. (2005). Delta College Distance Learning.	http://www.delta.edu/broadcasting/dislearnprog.html
	H111	03	Delta College. (2005). Delta College Distance Learning: Elearning.	http://www.delta.edu/elearning/
	H111	04	Delta College. (2006). *FY 2006-2007 Strategic planning and budget.* University Center, MI: Delta College.	
	H111	05	Delta College. (2005). Delta College: Experience the Delta Difference.	http://www.delta.edu/
	H111	06	Delta College. (2005). Delta College eLearning Office: Michigan Community College Virtual Learning Collaborative.	http://www.delta.edu/elearning/mccvlc.html
	H111	07	Edwards-Ham, P. (2003). Delta College Academic Assessment Plan 2002-2006.	http://www.delta.edu/assessmt/Academic%20Assessment%20Plan%20revise%20june%2006.doc
			Delta College. (2005). Delta College Distance Learning.	http://www.delta.edu/aqip/attachments/DeltaCollegeAQIPApplication.pdf
			Delta College. (2004). *The academic testing center.*	http://www.delta.edu/acadtest/
Missouri	K		Title	Location URL
State and Consortium Level	K100	01	Missouri Department of Higher Education. (2006). FY2006 Strategic planning documents. Jefferson City, MO: MDHE.	
	K100	02	Missouri Department of Higher Education. (2007). *Policy for the review of academic program proposals.*	http://www.dhe.mo.gov/policyforreview.shtml
	K100	03	Missouri Department of Higher Education. (2006). Financial summary. Retrieved September 6, 2007, from http://www.oa.mo.gov/bp/budg2008/HigherEducation.pdf	

Table B-1. Continued

State and institution	Protocol		Documents	
St Louis Community College	K110	01	St Louis Community College. (2007). *Distance learning.*	http://www.stlcc.edu/distance/
	K110	02	St Louis Community College. (2007). *Admissions and registration.*	http://www.stlcc.edu/admreg/
	K110	03	St Louis Community College. (2007). *Faculty and staff resources.*	http://www.stlcc.edu/resources/faculty-staff.htm
	K110	04	St Louis Community College. (2007). *Adjunct faculty certificate program.*	http://www.stlcc.edu/staffdev/adj_fac_cert_pr.htm
	K110	05	St Louis Community College. (2007). *Programs: College-wide professional development programs.*	http://www.stlcc.edu/staffdev/programs.htm
	K110	06	St Louis Community College. (2007). *Center for teaching and learning.*	http://www.stlcc.edu/fv/ctl/
	K110	07	St Louis Community College. (2007). *Blackboard at St. Louis Community College.*	http://www.stlcc.edu/blackboard/
	K110	08	St Louis Community College. (2007). *Blackboard: Student quick start guides.*	http://www.stlcc.edu/blackboard/students.html
	K110	09	St Louis Community College. (2007). Blackboard: Faculty.	http://www.stlcc.edu/blackboard/faculty.html
	K110	10	St Louis Community College. (2006). *Distance learning: Intellectual Property Ownership and Copyright Links.*	http://www.stlcc.edu/distance/text/resources/ownership.html
	K110	11	St Louis CC. (2007). St Louis Community College: Expanding Minds-Changing Lives.	http://www.stlcc.edu
	K110	12	Board of Trustees. (n.d.) St Louis Community College Policy. Retrieved July 14, 2007, from http://www.stlcc.edu/pol/slccpolicy.pdf	http://www.stlcc.edu/pol/slccpolicy.pdf

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State and institution	Protocol		Documents	
	K110	13	St Louis Community College. (2007). *St. Louis Community College three year completion and persistence rates for first-time, full-time, degree seeking students: fall 2003 to spring 2006.* Retrieved August 31, 2007, from http://www.stlcc.edu/services/consumer/graduate.html	
St Louis Community College – Florissant Valley	K111	01		
St Louis Community College – Forest Park	K112	01		
St Louis Community College - Meramec	K113	01	St Louis Community College - Meramec. (2007). *Center for support of teaching and learning.*	http://www.stlcc.edu/mc/services/cstl/index.htm
New York	L	5	Title	Location URL
State and Consortium Level	L100	01	The University of The State of New York. (2005). *The Board of Regents statewide plan for higher education.* Albany, NY: State Education Department	
	L100	02	Office of the Provost. (2004). The State *University of New York Master Plan, 2004-2008.* Albany, NY: State University of New York.	http://www.suny.edu/provost/txtfiles/MasterPlan2004-2008.txt
	L100	03	State University of New York. (2007). *University-wide Policies and Procedures.*	http://www.suny.edu/sunypp/
	L100	04	State University of New York. (2007). SUNY Learning Network.	http://sln.suny.edu/index.html

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State and institution	Protocol		Documents	
	L100	05	Office of College and University Evaluation. (2004). Distance Higher Education. Albany, NY: New York State Education Department.	http://web1.nysed.gov/ocue/Distance/default.htm
	L100	06	State University of New York. (2007). *SUNY Learning Network: SLN Community.* State University of New York (SUNY). (2006). Operating budget for community colleges. Retrieved September 6, 2007, from http://www.suny.edu/sunypp/documents.cfm?doc_id=171	http://pilot.sln.suny.edu/index.php
Monroe Community College	L111	01	Strategic Planning Team. (n.d.). *Strategic Plan: Forging connection: Serving community needs. 2007-2011.* Rochester, NY: Monroe Community College.	http://www.monroecc.edu/depts/mccadmin/stratpln.htm
	L111	02	Monroe Community College. (n.d.). Online Learning.	http://www.monroecc.edu/depts/distlearn/index.htm
	L111	03	Monroe Community College. (n.d.). *Online Learning: Students.*	http://www.monroecc.edu/depts/distlearn/students.htm
	L111	04	Monroe Community College. (n.d.). Online Learning: Faculty.	http://www.monroecc.edu/depts/distlearn/faculty.htm
	L111	05	Monroe Community College. (2007). Statistics. Retrieved August 31, 2007, from http://monroeccny.college-lnfo.com/&kid=GOG0010079203	http://monroeccny.college-lnfo.com/&kid=GOG0010079203
	L111	06	Monroe Community College. (2007). There's More To You. Retrieved August 31, 2007, from http://www.monroecc.edu/index.htm	http://www.monroecc.edu/index.htm
North Carolina	M		Title	Location URL
State and Consortium Level	M100	01	Fees for Extension Programs 23 N.C.A.C. 2D.0203 (2006).	

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State and institution	Protocol		Documents	
	M100	02	Parker, D. A., McGraw, D., Randall, B., & Williams, B. (2004). *Strategic plan for distance learning 2003-2004 through 2008* – 2009 for the North Carolina Community College System. Raleigh, NC: North Carolina Community College System.	http://vlc.nccommunitycolleges.edu/about/PDF/DL%20Strategic%20Plan.pdf
	M100	03	North Carolina Community College System. (2007). *Virtual learning community.* Retrieved September 13, 2007, from	http://vlc.nccommunitycolleges.edu/
	M100	04	Rogers, B. (2001). Analysis of funding issues related to distance learning in the North Carolina Community College System. Tallahassee, FL: Management of America, Inc.	
	M100	05	Office of State Budget and Management. (2007). The North Carolina state budget: Recommended operating budget with results-based information 2007-2009. Education, Volume 1. Raleigh, NC: State Budget Office.	
	M100	06	North Carolina Community College System. (2007). Intellectual Property Policy for the Virtual Learning Community. Retrieved September 13, 2007, from	http://vlc.nccommunitycolleges.edu/about/PDF/VLC_IP_Policy.pdf
Central Piedmont Community College	M111	01	Central Piedmont Community College. (2007). *2007-2008 Operational plan.* Charlotte, NC: Central Piedmont Community College.	http://www1.cpcc.edu/administration/strategic-plan/2007-2008-operational-plan/
	M111	02	Central Piedmont Community College. (n.d.). *Services for students: Current students.*	http://www1.cpcc.edu/services/current
	M111	03	Central Piedmont Community College. (n.d.). Information technology services: ITS for faculty and staff.	http://www1.cpcc.edu/its/faculty-staff/

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State and institution	Protocol		Documents	
	M111	04	Central Piedmont Community College. (n.d.). *Information technology services: Services for instruction.*	http://www1.cpcc.edu/its/faculty-staff/instructional-technologies
	M111	05	Central Piedmont Community College. (n.d.). *Elearning community: eLearning and distance learning.*	http://www1.cpcc.edu/elearningcommunity/support/documentation/elearning
	M111	06	Central Piedmont Community College. (2007). 2005-2006 Annual report. Retrieved August 31, 2007, from http://www1.cpcc.edu/administration/annual-report/2005_Annual-Report.pdf	
	M111	07	Central Piedmont Community College. (n.d.) Main webpage.	http://www1.cpcc.edu
Ohio	N	6	Title	Location URL
State and Consortium Level	N100	01	Ohio Board of Regents. (2003). 2003 *Vision, mission, goals, strategies and measures.*	
	N100	02	Policy Makers Guide: E-learning and distance learning. Retrieved September 13, 2007, from	http://regents.ohio.gov/policymakersguide/elearning.php
	N100	03	Ohio Learning Network. Retrieved September 13, 2007, from	http://www.oln.org/
	N100	04	Ohio Learning Network- About. Retrieved September 13, 2007, from	http://www.oln.org/about_oln/about.php
	N100	05	E-learning Athenaeum of Ohio: Resources for faculty innovators. (n.d.).	http://www.cscc.edu/oln/
	N100	06	Office of Budget and Management. (2007). State of Ohio Executive Budget Briefing Document, Fiscal Years 2008-2009. Retrieved September 8, 2007, from http://www.obm.ohio.gov	
	N100	07	Task Force on Quality in Distance Learning. (2002). *Quality learning in Ohio and at a distance.* Ohio Learning Network.	Retrieved August 20 2007, from http://www.oln.org

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State and institution	Protocol		Documents	
	N100	08	Ohio Learning Network. (2006). *Annual report. Expanding delivery: e-learning in Ohio.*	Retrieved August 20 2007, from http://www.oln.org
	N100	09	Ohio Learning Network. (2004). *The future of distance and e-learning in Ohio.*	http://www.oln.org/about_oln/e_policy_archives.php
	N100	10	Ohio Learning Network. (n.d.). Principles of good practice.	http://www.oln.org/about_oln/principles.php
	N100	11	Ohio Learns! (n.d.). *Best practices in student services.*	http://www.ohiolearns.org/bestpractices.php
	N100	12	Ohio Digital Commons for Education. (2005). The convergence of libraries, learning and technology. Proceeds of the conference, March 7-8, 2005.	http://www.oln.org/conferences/ODCE2005/
Cuyahoga Community College	N111	01	Cuyahoga Community College: Office of Distance Learning. (2007). *Student resource center.*	http://dlc.tri-c.edu/resources/
	N111	02	Cuyahoga Community College: Office of Distance Learning. (2007). *Distance learning site map.*	http://dlc.tri-c.edu/sitemap.htm
	N111	03	Cuyahoga Community College. (2007). Just the facts. Retrieved August 31, 2007, from http://www.tri-c.edu/about/docs/just.htm	
	N111	04	Cuyahoga Community College. (2007). *Home Page.* Retrieved August 31, 2007, from http://www.tri-c.edu/home/default.htm	http://www.tri-c.edu/home/default.htm
	N111	05	Cuyahoga Community College. (2005). Strategic Plan 2005-2010. Retrieved August 31, 2007, from http://www.tri-c.edu/plan/default.htm	http://www.tri-c.edu/plan/default.htm
	N111	06	Cuyahoga Community College. (2007). *Transfer Center.* Retrieved August 31, 2007, from http://www.tri-c.edu/Articulation/default.htm	http://www.tri-c.edu/Articulation/default.htm

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State and institution	Protocol		Documents	
	N111	07	Cuyahoga Community College. (2007). Instructor sites. Retrieved August 31, 2007, from http://instruct.tri-c.edu/home/default.htm	http://instruct.tri-c.edu/home/default.htm
Sinclair Community College	N112	01	Sinclair Community College. (2006). *Distance learning.*	http://www.sinclair.edu/academics/dis/
	N112	02	Sinclair Community College. (2006). *Distance learning: Overview of Distance Learning.*	http://www.sinclair.edu/academics/dis/OverviewofDistanceLearning/index.cfm
	N112	03	Sinclair Community College. (2006). *Distance learning: Policies of Distance Learning.*	http://www.sinclair.edu/academics/dis/PoliciesofDistanceLearning/index.cfm
	N112	04	Sinclair Community College. (2006). *Current students.*	http://www.sinclair.edu/current/index.cfm
	N112	05	Sinclair Community College. (2007). *AQIP Systems portfolio.* Retrieved July 24, 2007, from	http://www.sinclair.edu/about/aqip/2007systemsportfolio/index.cfm
	N112	06	Operations Council. (2006). Sinclair strategic plan – Goals and objectives by cluster – updated 11/27/06. Dayton, OH: Sinclair Community College.	http://www.sinclair.edu/about/aqip/pub/SPlanwAct.pdf
	N112	07	Sinclair Community College. (2007). *Cost analysis* (Budget FY 2002-2003 through FY 2006-2007). Retrieved September 8, 2007, from http://www.sinclair.edu/departments/budget/ReportsandAnalyses/index.cfm	
	N112	08	Sinclair Community College. (2006). *About Sinclair*. Retrieved August 31, 2007, from http://www.sinclair.edu/about/index.cfm	
	N112	09	Sinclair Community College. (2006). *Distance Learning: Course delivery methods.*	http://www.sinclair.edu/academics/dis/OverviewofDistanceLearning/CourseDeliveryMethods/index.cfm

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State and institution	Protocol		Documents	
	N112	10	Sinclair Community College. (2006). *Distance Learning Course Catalog.*	http://www.sinclair.edu/academics/dis/DistanceLearningCourseCatalog/index.cfm
Oregon	P		Title	Location URL
State and Consortium Level	P100	01	Advanced technology education and training grants and loans; rules. 30 ORS § 326.382 (2005)	
	P100	02	Education and Culture Chapter 340. Expanded Options Program, 30 ORS § 340.005 (2006)	
	P100	03	Oregon Department of Community Colleges and Workforce Development. (2001). *Community college handbook: State approval requirements and procedures for degrees, programs, courses and instructors*. Retrieved July 9, 2007, from http://www.odccwd.state.or.us	
	P100	04	Oregon Department of Education. (2007). Web Site Policy.	http://www.ode.state.or.us/search/results/?id=275
	P100	05	Oregon Network for Education. (n.d.). *Oregon's one-stop for distance education.*	http://www.oregonone.org
	P100	06	Oregon Network for Education. (n.d.). *ONE Faculty/Staff Center.*	http://www.oregonone.org/faculty.html
	P100	07	Oregon Network for Education. (n.d.). *Student services.*	http://www.oregonone.org/services.html
	P100	08	Office of the Governor (Oregon). (2007). The Governor's Hope and Opportunity Budget 2007-2009, Part B Education. Retrieved September 8, 2007, from http://www.oregon.gov/DAS/BAM/docs/Publications/GRB0709/B_Education.pdf	
Lane Community College	P111	01	Lane Community College. (2007). Lane's strategic plan. Retrieved August 6, 2007, from http://www.lanecc.edu/research/planning/visionmissioncore0408.html	http://www.lanecc.edu/research/planning/visionmissioncore0408.html

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State and institution	Protocol		Documents	
	P111	02	Lane Community College. (2007). *Distance Learning.*	http://www.lanecc.edu/distance/
	P111	03	Lane Community College. (2007). Distance Learning: Faculty and staff resources.	http://www.lanecc.edu/distance/staff.htm
	P111	04	Lane Community College. (2007). Distance Learning: Getting Started.	http://www.lanecc.edu/distance/geninfo.htm
	P111	05	Lane Community College. (2007). About Lane. Retrieved August 31, 2007, from http://www.lanecc.edu/mpr/aboutlcc.htm	
	P111	06	Lane Community College. (2007). Approved budget schedules, Fiscal Year 2007-2008. Retrieved September 8, 2007, http://www.lanecc.edu/budget/0708/Documents/ApprovedBudgetFY08.pdf	
	P111	07	Lane Community College. (2007). Students. Retrieved August 31, 2007, from http://www.lanecc.edu/es/students.html	http://www.lanecc.edu/es/students.html
	P111	08	Lane Community College. (2007). *Transfer programs*. Retrieved August 31, 2007, from http://www.lanecc.edu/stuser/acadinfo/tranhome.htm	http://www.lanecc.edu/stuser/acadinfo/tranhome.htm
Texas	R		Title	Location URL
State and Consortium Level	R100	01	The Texas higher Education Coordinating Board. (2000). *Closing the Gaps by 2015: The Texas higher education plan.* Retrieved August 6, 2007, from http://www.thecb.state.tx.us/reports	http://www.thecb.state.tx.us/reports/PDF/0379.PDF
	R100	02	The Texas higher Education Coordinating Board. (2007). *Closing the Gaps by 2015: 2007 Progress Report.* Retrieved August 6, 2007, from http://www.thecb.state.tx.us/reports	http://www.thecb.state.tx.us/reports/PDF/1377.PDF
	R100	03	The Texas higher Education Coordinating Board. (2000). *Texas Distance Education.*	http://www.txelectroniccampus.org/index.aspx

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State and institution	Protocol		Documents	
	R100	04	The Virtual College of Texas. (2007). Welcome.	http://www.vct.org/
	R100	05	Office of the Governor. (2007). Texas State Budget, Fiscal Years 2008-2009. Retrieved September 8, 2007, from http://www.texasgovernment.info/budget.html	
	R100	06	Legislative Budget Board Staff. (2007). Financing higher education in Texas: Legislative primer. Retrieved September 8, 2007, from http://www.lbb.state.tx.us/Higher_Education/HigherEd_FinancingPrimer_0107.pdf	
	R100	07	Institutional Report for Distance Education, Off-Campus Instruction, and On-Campus Extension Programs. 19 TAC § 4.106 (2007).	
	R100	08	Definitions. Tex. Educ. Code § 132.001 (2007)	
	R100	09	Virtual College of Texas. (2007). *Operations manual.*	Retrieved September 13, 2007, from http://www.vct.org/opn_manual.htm
Dallas County Community Colleges	R110	01	Board of Trustees. (2004). *Board of trustees system wide strategic plan, 2005-2008*. Retrieved August 6, 2007, from https://www1.dcccd.edu/cat0506/about/miss.cfm?loc=1	https://www1.dcccd.edu/cat0506/about/miss.cfm?loc=1
	R110	02	Dallas County Community College District. (2006). *Dallas TeleCollege: eConnect.*	http://ecampus11.dcccd.edu/webapps/portal/frameset.jsp?tab_id=_14_1
	R110	03	Dallas County Community College District. (2006). *Dallas TeleCollege: Distance Learning.*	http://dallastelecollege.dcccd.edu/
	R110	04	Dallas County Community College District. (2006). *Dallas TeleCollege: Faculty/Employees.*	http://dallastelecollege.dcccd.edu/Faculty/
	R110	05	Dallas County Community College District. (2006). About DCCD.	http://www.dcccd.edu/About+DCCCD/
	R110	06	Dallas County Community College District. (2007). Fast facts. Retrieved August 31, 2007, from http://www.dcccd.edu/About+DCCCD/DCCCD+Facts/	

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State and institution	Protocol		Documents	
	R110	07	Dallas County Community College District. (2006). Home page.	http://www.dcccd.edu/
	R110	08	Branch Campuses and Distance Learning. (2006). Dallas County Community College District 057501	Retrieved September 13, 2007, from http://www.dcccd.edu/
Brookhaven College	R111	01		
Cedar Valley College	R112	01		
Eastfield College	R113	01		
El Centro College	R114	01		
Mountain View College	R115	01		
North Lake College	R116	01		
Richland College	R117	02		
Washington	S		Title	Location URL
State and Consortium Level	S100	01	K-20 educational network board — Powers and duties, Rev. Code Wash. (ARCW) § 43.105.805 (2007)	
	S100	02	State Government — Executive Chapter 43.105. Department of Information Services (Formerly: Data Processing and Communications Systems), rev. Code wash. (ARCW) § 43.105.820 (2006)	

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State and institution	Protocol		Documents	
	S100	03	Washington State Board for Community and Technical Colleges. (2006). Washington state community and technical college workforce educational council's strategic plan. Retrieved August 6, 2007, from http://www.sbctc.ctc.edu/docs/education/workforce/wec_strategic_plan_000.pdf	http://www.sbctc.ctc.edu/docs/education/workforce/wec_strategic_plan_000.pdf
	S100	04	IC Planning Taskforce. (2005). The cornerstones report: An educational technology strategic plan for the Instruction Commission. Retrieved August 6, 2007, from www.sbctc.ctc.edu	www.sbctc.ctc.edu
	S100	05	Washington State Board for Community and Technical Colleges. (2006). *Education services: Elearning.*	http://www.sbctc.ctc.edu/college/e_elearning.aspx
	S100	06	Washington Online: A virtual campus of the community and technical colleges. (2006).	http://www.waol.org/home/default.asp
	S100	07	Office of the Governor. (2007). State Board for Community and Technical Colleges: Agency level summary, FY 2008- 2009 Budget. Retrieved September 8, 2007, from http://www.ofm.wa.gov/budget07/detail/NL699.pdf	
	S100	08	State Board for Community and Technical Colleges. (2006). Policy manual.	http://www.sbctc.ctc.edu/docs/policy_manual.pdf
	S100	09	State Board for Community and Technical Colleges. (2006). *Distance Learning Council Goals.*	http://www.sbctc.ctc.edu/college/_g-dlcgoals.aspx
	S100	10	State Board for Community and Technical Colleges. (2001). *Academic Year Report, 2000-01, Appendix A. Full-time Undergraduate Student Tuition and Fees.*	

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State and institution	Protocol		Documents	
Seattle Community College District	S110	01	Seattle Community Colleges. (n.d.). Strategic plan 2005 – 2010. Retrieved June 17, 2007, from http://www.seattlecolleges.com	http://www.seattlecolleges.com
	S110	02	Seattle Community Colleges. (2007). Our district: Facts at a glance. Retrieved August 31, 2007, from http://seattlecolleges.com/facts.aspx	
	S110	03	Seattle Community Colleges. (2007). *Distance learning*. Retrieved August 31, 2007, from http://www.seattlecolleges.edu/distance/	http://www.seattlecolleges.edu/distance/
	S110	04	Seattle Community Colleges. (2002/2008). Faculty development. Retrieved August 31, 2007, from http://dept.seattlecolleges.edu/fd/	http://dept.seattlecolleges.edu/fd/
North Seattle Community College	S111	01		
Seattle Central Community College	S112	01		
South Seattle Community College	S113	01		

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BIOGRAPHICAL SKETCH

Robert F. “Bob” Amason, Jr., is a management professional with more than 30 years in organizational leadership and consulting at all levels. He has an extensive background in a variety of disciplines: program and project management, human resource requirements determination, industrial engineering, operations management, organization development, total quality management, strategic planning, facilitation, benchmarking, performance assessment, education and training, systems management, and whole-system optimization. He has directed organizations charged with managing resources in excess of $320 million, developed academic organizations from the ground up, led major organizational change, and successfully developed client relationships leading to repeat business.

Amason holds a bachelor of science degree in economics (1974) and a master of science degree in industrial management (1975), both from Georgia Tech. He earned his doctorate in higher education administration at the University of Florida where he was a Graduate Alumni Fellow. Amason’s professional credentials include certification as a Project Management Professional (PMP). This certification, granted by the world's leading project management organization, places him in the top echelon of the world's 25 million project workers.

In addition to owning his own consulting firm, Bob serves as a university professor at the University of Phoenix’s Online and North Florida campuses and at Webster University International campus in Ocala, Florida. He teaches management principles, operations management, project management, and a variety of adult education and training courses at both graduate and undergraduate levels. Amason is past program manager of the Center for Project Management at the University of North Florida. He developed highly successful project management training courses and marketing materials that led to the success of the Center for Project Management for more than six years. As a doctoral fellow at the University of Florida,

Amason has served as executive director of the Institute of Higher Education where he coordinated strategic planning for that organization.

Amason has written for the *Jacksonville Business Journal*. He has been an invited speaker at the Southeast Enterprise Data Modeling Users Group, the Professional Teleservice Manager's Association, and the Jacksonville Information Technology Exposition and Conference. He is author of several training courses and has written a manuscript on project management.

In addition to his other professional accomplishments, Amason is also a retired U.S. Air Force lieutenant colonel who served the nation with distinction for more than 21 years. He has over 2,500 flying hours (2,000-plus hours in B-52G and H aircraft) as both crewmember and instructor. During his military career, he directed flying training, conducted human resource requirements studies, managed acquisition projects, and oversaw process improvement efforts for large, high-value operations. His military awards include the Defense Meritorious Service Medal, the Meritorious Service Medal with four oak leaf clusters, the Air Force Commendation Medal, the Air Force Combat Readiness Medal, and the National Defense Service Medal.

Amason's hobbies and interests include studying World War II aircraft and aviation history, playing and collecting acoustic guitars, and playing golf. He has two children who are pursuing their own higher education at Florida State University.