Agricultural educators perceptions on the role of distance education in the mission of United States public higher education

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Agricultural educators perceptions on the role of distance education in the mission of
United States public higher education

by

Paula Marie Teig

A dissertation submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

Major: Agricultural Education

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2003

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For the Major Program
TABLE OF CONTENTS

LIST OF FIGURES v

LIST OF TABLES vi

CHAPTER I. INTRODUCTION 1
   General Background of Study 1
   Organizational Change and the Mission, Vision, and Goals 6
   Balancing Culture with the Technological Innovations 6
   Land-Grant Universities and Colleges 7
   Agriculture Education 8
   Need for Study 9
   Purpose of the Study 10
   Objectives of the Study 10
   Guiding Questions 11
   Implications of Study 11
   Educational Significance 12
   Operational Definitions 12

CHAPTER II. LITERATURE REVIEW 14
   Distance Education 14
   Mission, Vision, Goals, and Strategic Plans 19
   Organizational Change 22
   Organizational Culture 33

CHAPTER III. METHODOLOGY 42
   Population 42
   Survey Design and Construction 43
   Pilot Test 48
   Data Collection 49
   Data Analysis 50
   Assumptions and Delimiters of the Study 51

CHAPTER IV. FINDINGS 52
   Objectives 53

CHAPTER V. CONCLUSIONS AND RECOMMENDATIONS 93
   Purpose 93
   Objectives 93
   Methods 94
   Conclusions 95
LIST OF FIGURES

Figure 1. The evolution of distance education 16
Figure 2. Model of planned change 30
Figure 3. Levels of culture 34
Figure 4. Department chair and college administration appointments 59
Figure 5. Modified model of planned change 115
LIST OF TABLES

Table 1. Rank and tenure status of respondents 54
Table 2. Frequency and percentage of respondents by time period for receiving rank 55
Table 3. Frequency and percentage of respondent by appointment percentage & type 57
Table 4. Frequency of respondents in a teaching position by group year 60
Table 5. Average number of students instructed in an academic year by rank 61
Table 6. Frequency of respondents who have taught a distance education course by rank 62
Table 7. Frequency of respondents who use technology in face-to-face courses by rank 63
Table 8. Number of respondents who use technology in face-to-face courses by technology type 64
Table 9. Level of current distance education adoption 66
Table 10. Number of years till adoption of distance education 66
Table 11. Current level of adoption by number of years till adoption 67
Table 12. Relationship between “The traditional land-grant mission of teaching, research, and extension can be enhanced through distance education” and selected organizational structure statements 70
Table 13. Relationship between “I am concerned if a clear understanding exists about distance education in the overall mission of the institution” and selected statement of concern 73
Table 14. Relationship between “I am concerned about whether a shared vision exists for distance education” and selected statements of concern 76
Table 15. Relationship between “I am concerned about faculty, staff, and administration disagreeing over common goals associated with distance education” and selected statement of concern 79
Table 16. Relationship between “I am concerned about whether distance education is addressed in my strategic plan” and selected statement of concern 81
Table 17. Relationship between “I am concerned about a lack of consensus among faculty, staff and administrators regarding distance education” and selected statement of concern.
Table 18. Identification of key factor statements by respondents
Table 19. Identification of key concern statements by respondents
Table E-1. Responses to organizational structure statements
Table E-2. Responses to statements of concern
CHAPTER I. INTRODUCTION

General Background of Study

As we begin the twenty-first century, nearly every aspect of our world is in some state of change, influx, transformation, reengineering, or restructuring as a result of computer or communication technologies. While the public sees private industry as undergoing the most visible change, it is oftentimes not apparent that higher education is also experiencing the same change. The plethora of technological innovations has not immediately caused a noticeable change in how higher education is doing business (NASULGC, 1999; Hanna, 2003c); it is more that change has been slower than desired to those external to higher education (Hanna, 2000b).

The resurgence of distance education, with the introduction of computer and communication technologies, has lifted the delivery of education to learners unable to attend on-campus classes is vastly affecting how higher education addresses the needs of the lifelong learner and fulfillment of the engagement mission set forth by the Morrill Act and reinforced by the Kellogg Report (1999). Distance education has afforded higher education the ability to reach new audiences and engage learners in new ways to participate in collaborative learning arrangements within the institution and among universities and colleges domestically and globally (Archer, Garrison & Anderson, 1999).

The increased acceptance and growth of distance education as part of the higher education landscape is evident in the National Center for Education Statistics (NCES) report. This report, summarized by Berge and Muilenburg (2001), stated that in the United States, one-third of the approximate 5,000 two- and four-year postsecondary institutions offered
distance education courses during the 1997-98 academic year, and another one-fifth planned to introduce distance education shortly thereafter. As a follow-up Berge and Muilenburg (2001) highlighted that the adoption of distance education is pacing even faster now than during the reference period for the NCES estimates.

Another study by the Council for Higher Education Accreditation (1999) stated in 1998 that 51% of higher education institutions in the United States had included a plan for information technology in their strategic plan. By 1999, this number had increased to 61%. Yet, the report cites that many of the same institutions had not created a similar plan for their distance education programs (Hache, 2000).

Distance education, specifically computer and communication technologies, has caught higher education off guard. Unlike their predecessors, computer and communication technology innovations have originated from the universities and colleges; however, the adoption and demand for continued usage is from the grassroots. Never before has the technology used to deliver education been adopted at such a rapid and overwhelming rate by the public it is serving (Bonk & Dennen, 2003). The public demands that higher education utilizes these technologies in addressing their educational needs; the preference for anytime-anyplace education has forced higher education to realize that there is no going back to the sole existence of residential based students and traditional pedagogy. Political factions are demanding that higher education utilize distance education to accomplish two things: to reach their constituents who are place bound and to stabilize the costs of education for students. Economic forces perceive distance education as more efficient; however, they ignore the internal costs such as faculty development time and increase in auxiliary costs such as library expansion/conversion and student-related services (Gelman-Danley &
Regardless of the arguments for or against widespread adoption of distance education, it has forced higher education into changing how they do business. This will be a challenge as higher education is currently grappling with moving from an industrial to postindustrial organizational structure (Berge, 2001; Hanna, 2000b), which may be overwhelming without integrating a communication change model (Ellsworth, 2001).

A decade has passed since Dr. Connie Dillon’s study provided the first insight into the factors that influenced faculty participation in the use of telecommunications (Dooley & Murphrey, 2001). Since that time, distance education has evolved from the broadcast and teleconferencing generation to something beyond the third generation of networks/multimedia. Distance education studies conducted in the profession of agriculture education have changed the focus from the student and their learning needs and concerns regarding distance education courses to faculty needs in the area of technologies and support. External studies conducted by Wolcott (2003, 1997), Berge (2001) and Betts (1998) focused on faculty motivations, incentives, disincentives, barriers, and challenges to participation in distance education.

Since 2001, a new venue of distance education studies has emerged, focusing on faculty philosophical position and organizational alignment of the mission (Husmann & Miller, 2001). Prior to 2001, Murphy and Terry (1998a) recommended further study in the effect of distance education on the organization and faculty cultures. Researchers external to the profession of agriculture education have voiced similar recommendations. Hanna (2000c), Bates (2000), and Wolcott (1997) recommended the exploration of faculty perceptions of their role in distance education and the relationships among the mission, vision, and goals.
They also emphasized the need for scholarly research in organizational culture as it pertains to distance education.

Regardless of the number and variety of studies conducted, higher education continues its struggle to integrate and utilize distance education technologies. This struggle has forced administrators, faculty, and staff to realize that in order to successfully implement new distance education programs, colleges or universities will need to reassess their programs and structures (Levy, 2003). Distance education has affected organizational structure, culture, and pedagogy (Hanna, 2000a; Bates, 2000); therefore, needed changes will be transformational and not procedural and process based (Hanna, 2003). A different set of change processes and communication strategies will be necessary to reflect the changing organizational system in a postindustrial setting which relies on greater faculty input and reflection in decision-making (Ellsworth, 2001).

With each technology generation, the effects on the organizational structure, culture, and administration have steadily increased to where new organizational models, units, and centers are created solely to address the unique needs of distance education and their faculties. However, Beaudoin points out that “few distance educators have the opportunity to create entirely new free-standing institutions exclusively designed for online or other delivery systems” (Beaudoin, 2003, p. 527). Subsequently, these same administrators work somewhere along the continuum between conventional and alternative infrastructures; they question if the existing central unit is better or if they should exert the effort to foster new initiatives. The reality is that most distance education initiatives are incorporated into the existing traditional structure; therefore, the status quo remains untouched (Beaudoin, 2003).
However, the latest evolution of technologies has challenged the status quo. Technological changes originating from administrators have been resisted at various levels throughout the institution (Hanna, 2003). While the levels of resistance vary among institution, more significant levels of resistance are found within the same institution as different entities within the same institution can have competing values (Bates, 2000; Berge, 2001). These competing values require more attention to culture and communication in the change process at each level of the organization.

Controversy exists as to who is to blame for the lack of long-lasting change. Hanna (2000b) has theorized that the primary resistance is from institutional administrators. Even though administrators are faculty, they hesitate to embrace or encourage change that challenges the status quo and system that put them in power (Moore & Kearsley, 1996) because the integration and consideration of faculty concerns and beliefs are seen as ways that could “change the way things are done around here.” Additionally, organizational inertia can inhibit the change process. Hanna stated, “Change in universities is often inhibited by organizational inertia rather than resistance to change by leaders, faculty members, or students. Reorganization and transformation are expensive, difficult, energy consuming, especially in organizations with well developed internal maintenance structures” (Hanna, 2000, p. 28). Studies by Meyer (2002) and Dooley and Murphrey (2001) stated that administration, faculty and staff share the same perceptions regarding distance education. Unfortunately, this similarity in perception has not decreased the inability to achieve a long-lasting organizational change.

Distance education is now a standard component in most agriculture education departments (Husmann & Miller, 2001). Thus agricultural education departments have
recognized the importance and probable longevity within the organization. However, the lack of proper attention to faculty needs and concerns still exists (Wolcott, 1997).

Organizational Change and the Mission, Vision, and Goals

Bates (2000), Hanna (2000c), and Willis (1993) stated that organizational change is needed for distance education to be fully adopted by faculty and their professional associations. This organizational change is necessary for distance education to be fully institutionalized and aligned with the university’s mission. Likewise, the institution must do more than endorse the concept of distance education (Wolcott, 1997). Its commitment should be articulated in the institutional goals, communicated in stated priorities, demonstrated through actions of the faculty as well as administrators, and fully understood at the department level.

The ability of an institution or organization to thrive in today’s world depends upon its ability to make significant and long-lasting internal changes while retaining a flexible organizational structure to address external demands (Hanna, 2003). At the same time, the change process can not ignore the impact upon the organizational culture and the impact upon the mission, vision, and goals (Bergquist, 1992).

Balancing Culture with Technological Innovations

To realize the impact of distance education on the academic culture the traditional cultural norms of the academy must be understood. These traditional norms have revolved around: 1) academic freedom, 2) self-regulated governance, 3) university change, 4) institutional policy, 5) faculty advancement, 6) teaching philosophy, 7) learning technology,
8) funding, 9) productivity and quality, 10) libraries, and 11) credentialism (Hanna, 2000b). Hanna has noted that these norms have been embedded and defined the role of faculty for decades. Unfortunately, these traditional norms have created faculty resistance to technological change.

The traditional norms and culture are being challenged in the current information and knowledge age. Organizational theorists such as Bergquist (1992), Schein (1992) and Robbins (1990) point to technology has the only threat to these norms and culture; however, innovation breeds modified policies, changing roles for faculty, new pedagogy, increased workload/productivity measures, new governance structures, and changes in promotion and tenure criteria (Rogers, 1995). Kotter (2002) stresses the importance of consideration of feelings in the change process. He states that the current change process models are linear and bureaucratic and do not allow for the human element of change. He further states that at the heart of change is emotion, and emotion is what drives and sustains change.

**Land-Grant Universities and Colleges**

The land-grant system of colleges and universities has been in existence since the signing of the Morrill Act of 1862. This act enabled each state to establish a college or university that would be available to the masses of American people oppressed by the elitist European higher education system that was designed to cater to the upper-class citizen (York, 2003). Therefore, the land-grant institutions became characterized as “people-serving” institutions and have explored ways in which knowledge could be used to improve the quality of life of the American people. More than any other educational institution, public or private, the land-grant system of colleges and universities strive to reach new audiences and
especially under-served groups (personal communication, Klonglan, 2002). The goal was to lift persons from the economic strata in which they were born by educating them regardless of distance and time constraints. Today's land-grant mission remains essentially the same: to educate the masses through teaching, research, and service (Spanier, 2000).

**Agriculture Education**

The profession of agriculture education (AgEd) has been in existence since 1862. Established at Iowa State College with the passing of the Morrill Act of 1862, it has since gone on to have a presence in nearly every land-grant university across the nation (Stefferund, 1962).

Agriculture education serves in many capacities to the American people. Holistically, agriculture education is comprised of three purposes: 1) Preparing learners for careers as agriculture educators at the secondary school level, 2) Training of persons for careers in extension and industry, and 3) Providing the knowledge base to pursue advanced degrees within the higher education system.

Distance education efforts in agriculture education at Iowa State University span back to the days of flying professors. However, distance education efforts can be traced as far back as the Corn Seed Gospel Trains (Rogers, 1995). The Corn Train was the initial outreach activity conducted by the Iowa State University Extension Service in the late 1800s.

More recently, agriculture educators have used a variety of technologies to engage the learner by using radio, two-way interactive television, videotape, CD-ROM, and now the Internet. Studies conducted by Murphy and Terry (1998a) and others have shown that agriculture educators have varied in their use of these technologies. The recent onslaught of
computer and communication technologies has caused somewhat of a split in regards to its usage by agriculture educators.

**Need for Study**

Since 1990, a number of studies have been conducted on distance education even though it has existed in various forms since the industrial revolution (Moore & Kearsley, 1996). A majority of these studies have focused on areas other than the role of distance education in the mission, vision, and goals of the university. Therefore, the ability of higher education to establish sustainable change within the organization and the faculty has been minimal. For higher education to achieve long-term change as a result of distance education, will require its inclusion into the mission, vision, and goals and to be understood by the faculty. With the emergence of postindustrial management practices, colleges and departments and ultimately the faculty are finding that they are responsible for program and initiatives within the universities.

Distance education has brought enormous changes to pedagogy and how higher education engages its learners. Since the introduction of computer and communication technologies, the impact on the culture of the organization and subsequently the faculty has been astronomical. However, widespread adoption has not occurred, so further changes in the organization are needed. The less than enthusiastic approach implemented by institutional administrators has placed the management of distance education far behind other programs. Little is known about the internal effects of distance education adoption as evidenced by recommendations from Hanna (2003, 2000); Bates (2000); Murphy and Terry (1998a); and Moore and Kearsley (1996). Therefore, we have once again returned to the beginning of
distance education but this time the focus is on the organization rather than the learner and their needs, technology usage, and barriers and challenges to participating.

**Purpose of the Study**

The primary purpose of this study is to determine the perceptions of agriculture educators toward the inclusion of distance education in higher education. The secondary purpose is to identify and examine factors affecting the organizational structure, faculty concerns, and the inclusion of distance education in the mission, vision, and goals and the change process.

**Objectives of the Study**

The specific objectives of the study are to:

1) Establish a profile of listed respondents in the 2002–2003 *American Association of Agricultural Educators (AAAE) Directory of University Faculty in Agricultural Education*.

2) Examine the relationships of the mission, vision, and goal statements with statements of organizational structure and concern.

3) Identify the levels and factors relating to group consensus toward distance education.

4) Identify key organizational structure factors that could affect participation of faculty in distance education.
5) Identify key levels of faculty concerns that could affect their participation in distance education.

Guiding Questions

1) What factors affect respondents’ decision to participate in distance education?

2) Is there a clear understanding regarding the role of distance education in the mission, vision, and goal statements by agriculture educators?

3) Is the traditional land-grant mission guiding distance education changes?

4) What are the key factors involved in the organizational culture as perceived by agriculture educators?

5) In what ways can the basic model of organization change be enhanced?

Implications of Study

The implications of this study are far reaching as it draws attention to the core of the operating unit unlike previous studies, which have looked at the needs of the clientele. Distance education is here to stay. Technological innovations such as computer and communication technologies are just the beginning; as there will be more to come as people continue to find better ways and means of using the existing technological structure.

What does this mean for education? Bates (2000) and Hanna (2000) have both espoused that the technological revolution will continue to impact education as society sees the technological advances in the private world and thus demands the same type of innovations afforded to them in their lifelong learning. In addition, the young and upcoming professoriate has been socialized using distance education and the related technologies as a
means of reaching new audiences. The skills they bring to higher education will only force a continual change of pedagogy with each new technological evolution. These changes and impacts ultimately affect the organization and its structure. If higher education does not understand how distance education is affecting its structure now, there is no guarantee that it will be easier in the future.

Educational Significance

The results of this study should describe respondents’ perceptions toward the inclusion of distance education. The study should also identify those factors that would either encourage or hinder their participation in distance education. Finally, the study will also identify baseline findings, which can be used to assist administrators in developing appropriate change strategies.

This is a baseline study as there is minimal literature on the effect of the mission, vision, and goals in distance education. This study will provide data for administrators and faculty who are creating mission, vision, and goal statements to include distance education. As applied to the discipline of agriculture education, this study will be one of the foundational studies for research yet to come.

Operational Definitions

- Distance education – The tool in which educational opportunities are afforded to lifelong learners using a variety of technologies that can span geographical and time differences to provide the instructor and the learners an interaction to develop their knowledge.
• Engagement – The ability of higher education to ready itself for change as it faces new social conditions, stakeholders, learners, and social developments (NASULGC, 2000).

• Organization – “Consciously coordinated social entity, with a relatively identifiable boundary, that functions on a relatively continuous basis to achieve a common goal or set of goals” (Robbins (1990), p. 8).

• Organizational culture – Another way to manage or design groups by focusing on the values, ideas, beliefs, norms, rituals, and other patterns of shared meaning that guide structured life.

• Current Member - For purposes of this study, a current member is described as an individual who was listed in the 2002–2003 AAAE Directory of University Faculty in Agricultural Education directory, updated annually by Dr. James E. Dyer.

• Land-grant universities – The land-grant universities are devoted to educating the people for the common good about agriculture issues as well as liberal arts and science, engineering, family and consumer sciences, education, and business (York, 2003).
CHAPTER II. LITERATURE REVIEW

This literature review is divided into four major sections: distance education; mission, vision, goals, and strategic plan; organizational change; and organizational culture. This literature review examines research related to the purpose of this study and also provides a means to examine the change process and the inclusion of the mission, vision, and goals.

Distance Education

Definition

Distance education experts have espoused a variety of definitions for distance education during the period of 1990-2000. This variety of definitions has provided opportunities for an institution to "pick and choose" the definition it finds most appropriate to its organizational value system and structure, current pedagogical direction, and its alignment with the organization's mission, vision, and goals. However, the primary criterion has been what will be the least disruptive to the organization as a whole (Prestera & Moller, 2001; Bates, 2000).

The definitions range from simplistic to conceptual and change almost as rapidly as technology evolves. A basic definition is stated by Willis (1993). Prior to the computer and communication technology evolution, he defined distance education as the interaction between the instructor and learner separated by physical distance and time with technology providing the medium for learning.

Other definitions have followed a conceptual perspective. Keegan (1990) cited four concepts for distance education: 1) geographical separation of the learner and the instructor, 2) the influence of an educational organization, 3) the use of technology for communication,
4) the provision for bidirectional communication, and 5) the absence of "quasi-permanent absence" of a peer group. Hanna (2003) supports the use of the Keegan concepts but is quick to point out the fourth concept is no longer valid with the adoption and implementation of synchronous communication tools such as videoconferencing, chat rooms, and email.

A comprehensive definition is submitted by Moore and Kearsley (1996). They defined distance education as the "planned learning that normally occurs in a different place from teaching and as a result requires special techniques of course design, special instructional techniques, special methods of communication by electronic or other technology, as well as specialized organized and administrative arrangements" (p. 2).

Evolution

The history of distance education is one of change in response to the industrial revolution driven by technological advancement and growing educational needs. Described by Moore (1993) and theorized by Peters (1990), distance education can be summarized as the use of industrial methods to design and deliver instruction using a systematic approach. This optimization was obtained though a mechanistic structure in which planning, division of labor, mass production of instructional materials, automation, standardization, and quality control existed. Implementation of the system or industrial approach was perceived as a means of achieving an opportunity for economies of scale, cost efficiencies, reliable outcomes, and effective learning. However, by the adoption of new technologies and the movement toward a postindustrial environment, distance education has begun to move away from the inflexible production-based industrial system to that of a systems approach (Saba, 2000; Moore & Kearsley, 1996). The postindustrial system is better able to address societal
and employee needs and the requirements necessary to become more engaged with the learner (Hanna, 2000).

Distance education has evolved through a number of generations as higher education has moved from an agrarian to a postindustrial age (Hanna, 2000a; Moore & Kearsley, 1996).

Figure 1 visually shows the evolution of distance education beginning with the first generation.

![Diagram of the evolution of distance education](image)

**Figure 1.** The evolution of distance education (Moore & Kearsley, 1996)

Distance education began with the invention of printing and the introduction of universal postal services. Correspondence study was the first distance learning format adopted by American institutions, and for generations it was the only one; however, it has had a limited but significant impact on university and college teaching (Pittman, 2003). It has
also been described as the means that lifted traditional classroom teaching into the realm of
distance education (Daniel, 1998).

The next generation introduced the concept of the Open University. The first national
university, the United Kingdom Open University (UKOU), was founded in Britain as a
national development function but designed to have no resident status (Hanna, 2000b).
He stated the national universities have been established in many countries that are struggling
to meet increasing demand from rapidly growing populations. They are also classified as a
means of improving access to higher education necessary to compete in the new global
economy.

Also in the second generation came the use of broadcast media, consisting of radio and
television (Moore & Kearsley, 1996). The extension of the traditional classroom to new
locations through the use satellite, broadcast, and cable television spearheaded a change in
how higher education reached out to new audiences (Hanna, 2000b).

The third generation, network and multimedia, provided the means for the emergence
of the Internet University. The Internet University has carved itself into the overall schematic
of distance education. While it does not fit neatly into either correspondence or extended-
classroom models, it has provided opportunities to address learner needs in any space and in
both synchronous and asynchronous models.

Emerging and alternative organizational models

Higher education’s inability to rapidly respond to new technologies has resulted in the
development of a number of organizational models to meet the changing educational needs
of society (Hanna, 2000b). Hanna identified five models that discern between on-campus and
distance learning. These are: 1) extended traditional universities, 2) for-profit, adult-centered universities, 3) distance education/technology-based universities, 4) corporate universities, and 5) university/industry strategic alliances.

Although the above-mentioned organizational models could be an answer in addressing the rapidly changing environment, they are by no means the only option. Duin, Baer, and Starke-Meerring (2002) stated that currently, with a few exceptions, the majority of land-grant and other public institutions in the United States are not leading the effort to develop a twenty-first century "outreach" university solely committed to distance education in order to meet the needs of the lifelong learners, even though the Kellogg Report (1999) has encouraged the use of technologies in distance education to engage the lifelong learner.

Hanna (2003) stated that the lines between traditional on-campus and nonresidential learning are fast becoming blurred. This is due to the integration of distance learning technologies into campus-based courses, access to wireless Internet, use of computer conferencing, and multiple learning formats. The only apparent commonality among these tools is the willingness of the faculty members to integrate them into their courses. However, faculty adoption of distance education-based technologies has been dependent on five items:

1) Availability of the technology and supporting technical assistance in the institution (Hanna, 2003).

2) The support and encouragement of the institution and its leaders (Hanna, 2000b).

3) A clear understanding of distance education in the mission (Bates, 2000).
4) A shared vision for distance education.

5) A consensus of the common goals of distance education.

**Mission, Vision, Goals, and Strategic Plans**

**Mission**

Gilley and Maycunich (2000) stated that an organization’s mission and strategy are significantly influenced by the leadership and culture of the organization. They further stated that when developing a mission statement it should identify the following: 1) purpose, 2) direction, 3) customers, 4) goal, 5) the significance of what is to be accomplished, and 6) the purpose of the future.

Mouton and Killingsworth (1995) stated that higher education is rethinking its mission in part explained by the following: 1) “higher education is not being responsive to societal needs,” 2) “public reaction to the rising cost and declining quality of higher education,” and 3) “the decrease in funding for both education and research,” (p. 1). Ironically, these are the same concepts highlighted in the Kellogg Report (1999) fours years later. Does this mean that the importance of the mission is not applicable? Mouton and Killingsworth (1995) stated that “higher education’s preoccupation with research, publishing, and graduate education to the detriment of undergraduate education is seen to be indicative of higher education’s unresponsiveness to societal needs” (p. 1). To address the rising costs and declining quality they stated that the public sees higher education as necessary to achieve upward mobility and an acceptable standard of living. Ironically, this is the primary reason for the creation of the Morrill Act of 1862: to provide the masses of American people an opportunity to raise themselves out of the economic and social strata to which they were born (York, 2003). In
order for the mission of the organization to be meaningful, the administration must support its efforts and use it to direct the organization in their decision-making. In summary, Husmann and Miller (2001) suggest that a refocusing of the mission is needed for distance education efforts so that they are a part of the underpinning (i.e., teaching, research, and service) of the institution.

**Vision**

Many researchers have written about the necessity of having a vision and plan for the implementation of distance education efforts (Levy, 2003; Hache, 2000; Saba, 2000; Moore, 1994). However, Hache (2000) clearly stated faculty, staff, and administration need to start with a clear understanding of the vision and that its effect will cause a change in the organizational culture. Therefore, the integration of distance education programs into the existing campus-based structure should not be encouraged as the distance education initiatives generally have a different vision (Saba, 2000) and a different administrative and support structure designed for the non-traditional off-campus student (Bates, 2000; Moore & Kearsley, 1996). Dooley and Murphrey (2001) also supported this statement in their study that identified two of the flaws to distance education adoption were weak communication channels and using old models to develop new policies was viewed as threats by administrators, faculty, and supporting units.

The reality is that many distance education programs are implemented based on a vision that is not universally shared and where the goals are not clearly stated (Saba, 2000). Therefore, it is critical that all stakeholders participate in the planning and that their concerns are addressed when creating a vision plan (Hache, 2000). According to Levy (2003), without
the commitment of those involved, many issues will not be resolved and questions remain unanswered, which may cause frustration, confusion, and discontentment. However, it may be difficult to move forward with a single vision, and the development of policies and procedures are the greatest challenges facing distance education.

**Strategic planning**

Strategy, according to Gilley and Maycunich (2000), is how an organization intends to achieve its purposes over an extended time. Strategy identifies the tasks and activities that the organization will undertake in order to demonstrate its purpose and define its direction. They further stated that organizations consider their strategy to be the game plan and should be embraced and executed by all members. Robbins (1990) stated that strategic plans should remain flexible, be adaptive, and consider unique circumstances and events but should always be focused on helping the organization achieve its desired purposes and goals.

In a learning organization, the organization’s mission and strategy should be firmly communicated to and understood by all members (Bolman & Deal, 1996). While higher education has not fully adopted the learning organization concept, it does for the most part integrate faculty and staff into the strategy development phase; however, administration ultimately develops the ending mission statement (Woodman, 2002, personal communication). Those who possess strategic planning astuteness must be able to assist those few who do not have the conceptual understanding to create a viable strategic plan for adoption of distance learning methods that are congruent with the organization’s values and goals (Archer, Garrison & Anderson, 1999).
Communication by institutional leaders

A review of literature (Husmann & Miller, 2001; Archer, Garrison & Anderson, 1999; Moore & Kearsley, 1996) stresses the need for administrators to provide support and encouragement for distance education initiatives. However, Husmann and Miller (2001) discovered that what the administrators did not see was their role in making distance education initiatives effective. Furthermore, they are oftentimes unaware of the opportunities afforded to their colleges through distance education efforts (Moore & Kearsley, 1996). Archer, Garrison and Anderson (1999) stated that administrators are busy and do not necessarily take the time to understand all the components of distance education such as the terminology, technology, and issues facing instructors and students. Husmann and Miller (2001) pointed out that administrators see their role as administering the program and not having ownership. Yet, they do possess the ability to create positive organizational changes through distance education initiatives (Dooley & Murphrey, 2000). In addition, administrators have the potential to greatly affect the success of distance education initiatives by securing resources, influencing potential participants, supporting organizational changes, and implementing processes that concern instructors and students (Berge, 2001).

Organizational Change

Historically, universities and colleges have been content to exist in the industry-based hierarchical structure that has carved out its existence for centuries (Hanna, 2003). Administration has seen little need to change and when change has occurred it was more to create nonthreatening additions such as building greater levels of capacity, add more
administrative levels, and expand programs as these efforts do not pose a threat to the traditional bureaucratic structure and organizational culture.

The array of challenges that higher education faces today is virtually unparalleled when compared to any other point in American history. The litany of changes are all too familiar to those in higher education: 1) financial pressure, 2) growth in technology, 3) changing faculty roles, 4) public scrutiny, 5) changing demographics, 6) competing values, and 7) the rapid rate of change in the global setting (Kezar & Eckel, 2002). They further state that the changes that institutions face are more than minor adjustments as each year more institutions attempt to create comprehensive or, in some cases, transformational change. Hanna (2003) stated that change strategies have not been helpful in planning for successful change and have been even less successful in facilitating major institution wide change.

Most universities and colleges are characterized as being torn between two forces of change: organizational inertia and the evitable need for change. In the middle are the administration and faculty, the governing bodies of the higher education institution. Both have a vested interest in the institution; however, administration is concerned about protecting the status quo as it is the system that put themselves in power (Hanna, 2000b); whereas, faculty members are concerned with the changes to the traditional cultural norms of the academy.

Nevertheless, the strength of the institution comes from its inertia. Inertia helps in making the institution accountable and reliable in what they do; in short, it makes itself predictable. This stability affords higher education the change to obtain short-term competitive advantages with each new technology. However, distance education has
uprooted the organization and has forced it to reexamine itself in an attempt to address the needs of its most vocal stakeholder, the public (Hanna, 2000a; Bates, 2000).

Distance education is an arena for change in higher education. As new communication and computer technologies have changed nearly every aspect of our lives, the change in higher education has gone relatively unnoticed to those external to the institution (Hanna, 2003). A few researchers say that technology should not be the impetus to drive organizational change while others state that technology cannot be integrated into the teaching and learning process without changing the culture of the educational process (Moore & Kearsley, 1996).

Most of the time, according to Husmann and Miller (2001), faculty are the driving force behind the implementation of distance education on most campuses; thus, distance education program planning is limited to instruction. Daniel (1998) stated that the problems with distance education, particularly online distance learning, will be significant if colleges continue to let individual faculty and departments put classes online without a plan to implement the support structure involved in teaching and learning.

The effect of change on the organization is that it creates or increases ambiguity, confusion, and distrust so that people no longer know what is expected of them or what to expect from others (Bolman & Deal, 1996). Gilley and Maycunich (2000) stated that there is nothing more constant than change within an organization. If this is a truism, the repetition of the change should allow it to become a norm or value of the organization, resulting in a change of culture (Robbins, 1990). Change generates division and conflict among competing groups and is often done without planning by framing the issues, building coalitions, and
establishing arenas. All of these can be construed as a change in the culture a change in the way things are always done around here.

**What initiates the need for an organizational change?**

Change within an organization occurs because of people finding a better way to accomplish a task (Robbins, 1990). He also points out that it can be identified as an opportunity to capitalize on an effort, in anticipation of or in reaction to a problem.

Hanna (2000b) stated that universities have existed for centuries and have successfully adapted to changing conditions. The rate at which change occurs has been significantly slower than the one to which our society is accustomed.

Not surprising is the differing philosophies of change. Schlecty identified three forms of organizational change of which Hanna (2003) cited the following:

1) Procedural change – Altering how organizational tasks are accomplished.
2) Technological change – Changing the means in which a job is done.
3) Structural and cultural change – Oftentimes referred to as systematic, this change involves changing the nature of work itself and reorienting the purpose.

These forms of organizational change are internally based. A differing philosophy is expressed by Kimberly. Kimberly (1987) espoused that for fundamental change to occur, the energy and perspective must come from outside the organizational culture. He elaborated by stating, “Those who have become a part of culture and identify with the organization are those least able to precipitate major changes” (p. 168). He further asserted that organizations, such as higher education, are created to accomplish a specific purpose. This requires creating a stable environment that is conducive to the organization’s survival. This stable environment
is governed by formalized roles and devises rules and procedures to maintain the status quo. An example of this is the well-developed faculty governance system called promotion and tenure.

In the context of distance education, Hanna (2003) espoused various reasons why the move toward distance education is a preceptor of organizational change. First, distance education is directly linked with changing organizational processes and procedures as well as developing new organizational models, as presented in the distance education section of this chapter. Second, an increased demand for learning on a global basis is seen as higher education enters the knowledge age and as technology changes the way we interact with each other. Students, on a global basis, are applying pressure on higher education to deliver education any time, any place. This has forced higher education to become innovative, flexible, and creative in serving the needs of the lifelong learner. Third, the continued acceptance and adoption of distance education are applying pressure on departments to transform and to become a flexible unit that can respond to change without requiring many additional resources (Berge, 2001).

**Challenges of organizational change because of distance education**

Universities cannot meet the needs of all students, faculty, and taxpayers; however, it must remain clearly focused on teaching, research, and service as this tripartite is the underpinning of the university. Inasmuch, distance education has given the public and government the perspective that universities and colleges can meet all the educational needs as the learner can now learn any time and any place (Dillon & Walsh, 1992).
Another challenge, according to Anderson and Garrison (1998) and Hanna (2000c), is the faculty culture or institutional culture, which historically has emphasized individual accomplishments and independence. It is common to hear of the Lone Ranger attitude of those faculty members who participate in distance education. The go-it-alone, individualistic approach prevails, as this is the primary basis for faculty evaluation within the university promotion and tenure evaluation process. The competitive faculty evaluation schemes often fail to recognize collaborative research, teaching, or other avenues of scholarship even when this type of activity represents a more efficient use of faculty time and energy.

The renewed commitment to the tripartite of teaching, research, and service will ultimately increase engagement as American higher education restructures itself in an attempt to meet the demands of the lifelong learner. Hanna (2000c) wrote that the future points to an institution that looks completely different from the traditional university. He continued by stating that at the head of this transformation is the faculty, without whose support any change within the university structure is slow if existent at all. It is imperative that before any sustainable change occurs, all the players have a say in how, when, and why the organization is changed.

Olcott and Schmidt (2000) believe that in order to understand organizational change and to be able to re-create or modify the system, individuals and organizations must prepare for and develop a means to integrate the change. Robbins (1990) stated that the objective of a planned change is to keep the organization current and viable, which at times is difficult for higher education to comprehend as it has been insulated from the changes for decades. A review of literature indicates that the newly emerged models are often just presented with
only a mention, if any, of how the planned change occurred (Hanna, 2003). However, Robbins (1990) stated that without planned change, the success of the change is diminished.

Organizational change and leadership

Beaudoin (2003) pointed out that the incremental growth of widespread individual initiatives within an institution, such as a department or cases faculty, will eventually lead to a critical mass of participation and ultimately create a demand for greater institutional support and commitment. Proponents of the change theory maintain that it is a pattern that typifies most institutions' progression toward distance education today and that premature administrative-driven initiatives only generate further faculty resistance and impede any prospect for long-term change.

To succeed in adjusting the organization for a long-term change, distance education leaders must not be overly preoccupied with nurturing their own existing programs (Beaudoin, 2003). Leaders must be cognizant of the complexity and dynamic nature of cultural values, conflict, and organizational change in assessing the planned process that must occur in order for the change to be implemented. He also suggested that the weakest link in the planning process is the creation of strategies and tactics. In an era when consumers have many choices, public institutions need mechanisms to assess the environment so that they can identify and implement programs and service that meet their clients' needs and at the same time attend to the mandates and internal culture (Simonson & Bauck, 2003). They stated, “Often overlooked when policies are developed are those that relate to the vision, mission and understanding of distance education. Many recommend that, when an educational
organization decides to become involved in offering or receiving distance education, its vision and mission statements should reflect its commitment to distance education” (p. 422).

The success of distance education is the recognition that this type of education is credible, of high quality, and appropriate. Simonson and Bauck (2003) stated that distance education is new and misunderstood by many, and thus training, administrative support, publicity, and attention to quality are important components of a successful and accepted distance education program and that organizational policies should include distance education.

Model for planned change

Robbins (1990) espoused that organizational change can be broken down into a set of steps initiated by certain forces (technological, political, economic, and social) which in the end results in organizational effectiveness. Figure 2 visually shows the model for managing organizational change developed by Robbins (1990). This simplistic model has been accepted as a means to implement organizational change with modifications to fit the need of the user.

Robbins (1990) identified a variety of determinants related to structural change. Determinants are defined as those activities or pressures that create a need for change in the organization. The ability to reach new populations, increase accessibility for education, nurture changes in educational strategies, and create collaborations are all examples of a determinant.

Change agents are those persons who have power and authority in the organization and are typically those individuals who hold upper-level administrative positions. However,
lower-level individuals who may view the change as originating solely from higher-level administration (Bolman & Deal, 1996) do not take many times the change seriously. Therefore, in order for the change agent to be effective in facilitating the change communication channels must be an open and two-way system (Robbins, 1990).

Robbins (1990) identifies the next layer in the model as intervention strategies. According to Robbins, intervention strategies are the choice of means by which change takes
place and tend to fall into four categories: people, structure, technology, and organizational processes. Change agents may utilize one or more intervention strategies.

To understand the categories, each is defined below:

1) **Structure** Allocation of rewards; degrees of formalization; additions or deletions of departments, programs, initiatives, and positions.

2) **Technology** Modification in technologies that employees use, interdependency of work activities among employees, and changes that affect the interrelationships between employees and the technical demands of their jobs. An example of this category is the conversion of a face-to-face course to distance learning.

3) **Organizational Process**: Decision-making and communication patterns that change the input process.

Implementation is the third level of the model and consists of two separate groups: change process and implementation tactics. The change process consists of three steps: unfreezing, the movement to a new state, and then refreezing the change. Implicit in this three-step change process is the recognition that the mere introduction of change does not ensure the elimination of the previous condition. Maintaining the status quo, which is prevalent in bureaucratic organization, is considered as an equilibrium state. The pressure of both individual and group conformity must overcome the state of equilibrium and in order to do that, unfreezing is necessary. There are three main ways of releasing the status quo: 1) driving forces that direct behavior away from the status quo can be increased, 2) restraining forces that hinder movement away from the existing equilibrium can be decreased, and 3) a combination of 1 and 2. Once unfreezing is complete the change can occur. In order for the change to be sustained over time it must be refrozen. If the change is not refrozen, then it will
be short lived and employees will revert back to the prior equilibrium state. Refreezing also acts as a means to stabilize the new situation by balancing the driving and restraining forces over time. However, until the change is accepted as a norm, the change agent may need to rely on more formal mechanisms to sustain the change.

How can it be made sure that the change will stay permanent? Robbins (1990) identified five factors necessary for permanent change:

1) Reward allocation system. A proper reward system will assure that the change will not be short lived.

2) Support from the upper management must be supportive and encouraging and provide legitimacy of the change.

3) Good communication. In order for the change to be sustainable, people need to know what is expected of them and not wonder when their workload will be adjusted to help sustain the change. Communication of the mission, vision, and goals of the institution in regards to the change is needed in order for all people to fully understand the applicability of the change.

4) Group forces. As adoption of the change occurs more employees will become aware that others in their group accept and sanction the change, and they will become more comfortable with it.

5) Commitment. If employees are allowed to participate in the change decision they can be expected to be more committed to seeing that it is successful. Change is less likely to become permanent if it is implemented in a singular unit of the organization, for example, a department. The greater the diffusion throughout the
organization, the more units will be affected thus creating a greater legitimacy that
the effort will carry.

These factors lead us to see an organization as a system. Therefore, the planned change
will be more successful when all the parts within the system support the change effort.
Change requires careful balancing of the system as any change will ultimately impact
external entities to the organization. Conversely, any change within the system will affect
other parts of the system.

Organizational Culture

Organizational theorists Schein (1992), Senge (1995), Clark (1985), and Austin (1990)
have studied organizational culture in the context of private industry. Dill, Clark, and Austin
have researched organizational culture in mainstream higher education. Since much of
distance education research is derived from disciplines external to education, many specific
theories or approaches have been applied to the field of distance education (Wolcott, 2003).
Hanna (2000c) and Murphy and Terry (1998b), as well as others, have recommend further
study in the area of organizational culture within the context of distance education as none is
available to use as a means of empirically analyzing distance education.

To uncover the levels of culture, Schein (1992) has developed a linear system of
assessing the impact of the different levels. In Figure 3, Schein (1992) defined the top level,
artifacts, as the visible product of the group such as its technology and products as embodied
by published list of value, mission, and goals, for example. This level is also includes the
behavior of the group and the organizational processes in which the behavior is made routine.
Visible organizational structures and processes

Strategies, goals, philosophies
(espoused justification)

Unconscious, taken-for-granted beliefs, perceptions, thoughts and feelings (ultimate source of action)

Figure 3. Levels of culture (Schein, 1992)

This level is difficult to decipher because of the internal divisions, which comprise the whole and can be mistakenly framed because of individual perceptions and attitudes.

Espoused values represent what the group shares as a justification (see Figure 3) (Schein, 1992). The slow process of the cognitive transformation leads the underlying basic assumptions into a shared belief or value and ultimately becomes a shared assumption.

Mission, vision, and goal statements are an example of an underlying assumption which through cognitive transformation has been elevated into an espoused value that the group adopts and accepts as a cultural assumption. To achieve this, social validation is needed and can only be attained by the shared social experience of the group. These types of values are integrated by founders and leaders as a means of reducing uncertainty in a group’s functioning.

Schein (1992) described the lowest level of culture, basic underlying assumptions as the result of when something is tried and proven to be successful on a repeated basis, it comes to
be taken for granted. When the activity has moved to being taken for granted little variation within a cultural unit will be found. Schein (1992) stated, "In fact, if a basic assumption is strongly held in a group, members will find behavior based on any other premise inconceivable" (p. 22). Argyis (as cited in Schein, 1992) defined basic assumptions as "theories in use, the implicit assumptions that actually guide behavior, that tell group members how to perceive, think about, and feel about things" (p. 22). Unfortunately, Schein (1992) stated that oftentimes reflective activities are conducted in this stage. Therefore, the momentum to rise to the next level is gone, with the end result of not making the change and subsequently not changing the status quo.

Why is there a need to understand culture? Tierney and Rhoads (1994) stated, "Organizational culture shapes members' behavior; yet at the same time, culture is shaped by organizational actors. Culture is more than something that an organization has; instead, culture is something an organization is" (p.1). Equally important, an awareness of culture enables us to recognize those actions and shared goals most likely to succeed and how they can be best implemented.

A number of distance education researchers, Husmann and Miller (2001), Prestera and Moller (2001), Berge (2001), Hanna (2000c), Murphy and Terry (1998a), and Dillon and Walsh (1992), have asserted that the need to understand culture, in the context of distance education, is imperative to substantiate further growth as well as to align it with the mission, values and goals of the organization.

Schein (1992) stated the following reasons why we need to understand culture. First, "cultural analysis (audit) illuminates subcultural dynamics within organizations" (p.xii). Schien rationalized this statement as is a need to understand what goes on inside
organizations when different subcultures and groups must work with each other. Second, "cultural analysis is necessary as we are to understand how new technologies influence and are influenced by organizations" (p. xii). Third, "cultural analysis is necessary for management across national and ethnic boundaries" (p. xii). As it is important to understand the subculture concept within a group, so is it important to understand it in a national or ethnic context as well. This has never been more relevant than today; internal and external collaborations are expected by administration of faculty and staff, funding agencies, as well as those who originated the land-grant mission (Kellogg Report, 1999). Finally, "organizational learning, development, and planned change cannot be understood without considering culture as a primary source of resistance to change" (p. xii). Schien rationalized this by stating that resistance to change and learning is a ubiquitous phenomenon often talked about but seldom understood. However, those persons who are the change agents, the administration, can gain a better perspective if it is realized that most organizational change usually involves some changes in culture, often at the subcultural level.

What are the traditional cultural norms of an organization? Olcott and Schmidt (2000) insisted that higher education must first understand the traditional cultural norms of the academy before attempting changes to the organizational structure and ultimately affecting its culture. These norms have defined the role of faculty for decades; have become embedded in the mainstream academic culture; and have remained intact with relative immunity to public, government, and corporate scrutiny up until the early 1990s. The changes that have occurred have been the result of technologies, increased accountability, shifts in educational market demands, and more-selective consumers of education now with more places in which to achieve their educational needs. Most important is the perception that traditional colleges
and universities are unable to adequately respond to the rapid changes transforming society (Duderstadt, 1999).

Probably the most noted cultural component is the faculty reward system (Wolcott, 1997). Wolcott stated that the faculty reward system is the most prevalent means by which the faculty can affect the institution and how it does business. The rules and regulations set forth in the faculty reward system are the declarations in which the institution expresses its objectives, purposes, and values through the mission statement. In theory, there should be a strong connection between the values and goals, priorities and policies that are derived from them. Bates (2000) stated that the way most universities and colleges are managed results in full-tenured track faculty having a significant influence in academic policies. This influence extends into setting the criteria for appointment, tenure, and promotion of their subordinate faculty members through the promotion and tenure process.

Bates (2000) further stated that because of the central role in which faculty members interact in the work of the university or college, any change, especially in the areas that affect teaching and research, is completely dependent on their support. Therefore, in order for faculty to support distance education, it must be considered congruent with the beliefs and values already held about university education (Rogers, 1995).

How does culture fit into the schematic of an organization? Two prominent organizational theorists, Bergquist and Austin, have espoused different cultural categories in assessing organizational culture. The Bergquist model, as cited by Hanna (2003), identifies four primary cultures, which all interact with each other in different ways depending on the mission, programs, and historical framework that vary from institution to institution. This
model is typically in conjunction with culture related to distance education initiatives. The four areas are as follows:

1) Managerial. This culture finds meaning in the organization of work and conceives of the institution’s enterprise as the inculcation of specific knowledge, skills, and attitudes.

2) Developmental. Meaning is found in furthering the personal and professional growth of all members of the collegiate community.

3) Negotiating. This process is concerned with and responsible for establishing and executing equitable and egalitarian policies and procedures for the distribution of resources and benefits in the institution.

4) Collegial. In most cases, this is the core of the institution and is sustained primarily by faculty members. It finds meaning in the academic disciplines and values faculty research, scholarship, teaching, and governance. By its nature, it wants to hold sway over the institution’s most important assets its curriculum and faculty.

Hanna (2003) has adapted Bergquist’s work to emerging organizational models and university cultures and has introduced a fifth important culture that is emerging worldwide, the entrepreneurial culture. This culture values change, the ability to adapt and to change quickly; respond to market forces; connect with and generate support from external audiences and constituents; and introduce new ideas, programs, delivery mechanisms, and goals and purposes into the other four cultures.

Hanna (2003) stated that dramatic changes in higher education are under way and distance education programs and technologies are often major drivers of this change. He further elaborated by stating these changes are more than simple procedural changes or ways
of conducting business; they represent fundamental shifts in values, assumptions, and missions and will result in new cultural assumptions and understandings over time.

Austin (1990) stated there are at least four cultures present in an academic organization: 1) culture of the academic profession, 2) culture of the discipline, 3) culture of the academy as an organization, and 4) culture of the institutional type. Looking through the interpretive frame, these cultures affect how faculty interact with students; conceptualize, organize and implement their work; participate in decision-making; and balance the demands of disciplinary and institutional responsibilities.

**Culture of the academic profession**

Disciplinary specialization and institutional type strongly affect faculty perspectives and behaviors within the institution; however, some overarching values link faculty across the range of disciplines and institutions (Kuh & Whitt, 1988; Clark, 1985).

Austin (1990) asserted that several values and concepts make up the foundation of the academic profession. The key values are the following: 1) the purpose of higher education is to pursue, discover, produce, and disseminate knowledge, truth, and understanding; 2) autonomy and academic freedom in teaching and research are valued as ways to maintain quality and protect creative as well as controversial ideas; 3) commitment to intellectual honesty and fairness must be steadfast; 4) collegiality is held up as the ideal framework for faculty interactions as well as institutional decision-making. Austin elaborated by stating in conjunction with this belief that the university or college is a community of scholars who work together to govern the institution. The final value is one that underpins the academic institution—the commitment to service for society.
Culture of the discipline

During the twentieth century, the department has become the organizational element in American colleges in which the faculty member strongly resonates. The discipline is the major cultural force affecting faculty. It is the one place faculty seek acceptance, share ideas, and discuss what the direction should be. Austin (1990) stated this particular culture is the central source for a faculty member’s identity, affecting “assumptions about what is to be known and how, assumptions about the tasks to be performed and standards for effective performance, and assumptions about patterns of publication, social interaction as well as social and political status” (p. 64).

Culture of the academy as an organization

Austin (1990) stated as higher education has developed historically, the culture of colleges and universities as social organizations traditionally has revolved around two values: 1) “the belief that universities and colleges are involved in ‘good work’ and 2) a commitment to collegiality coupled with autonomy as the appropriate organizational context within which faculty should work.”

Austin (1990) pointed out that in addition to the two beliefs, organizational culture also relates to the compliance system. In addition to collegial components, universities and colleges have a professional bureaucratic system with a corresponding managerial culture. She further stated that while collegial and bureaucratic structures have always produced inherent conflicts, since 1980 external pressures have shifted the balance between the collegial and managerial cultures. She provides the example of the demand for increased
accountability by external forces that ultimately contributed to greater centralization, diminished faculty participation in organizational decisions, constraints on faculty autonomy, and increased workloads with subsequent same level salaries.

Culture of institutional type

Light, Marsden and Corl (1972) espoused the modern academic career in terms of strands: the disciplinary career, the institutional career, and the external career. Austin (1990) stated, “The employing institution defines the institutional career, strongly affecting the duties, opportunities, rewards, relationship to the discipline and prestige the faculty member experiences” (p. 66).

Austin further elaborated that the key elements in a college or university culture include the mission and goals of the institution, governance structure, and leadership style of the administrators. The institutional mission is of particular importance as it affects the socialization of faculty, tasks faculty must complete, and performance standards (Austin, 1990). The culture of the institution is a strong force affecting faculty values and activities.
CHAPTER III. METHODOLOGY

The purpose of this study is to determine the perceptions of agricultural educators toward the inclusion of distance education. The secondary purpose is to examine factors of organizational structure and faculty concerns and the inclusion of distance education in the mission, vision, and goals and change process.

As explained in the first chapter the specific objectives of the study were to:

1) Establish a profile of listed respondents in the 2002–2003 American Association of Agricultural Educators (AAAE) Directory of University Faculty in Agricultural Education.

2) Examine the relationship of the mission, vision, and goal statements with statements of organizational structure and concern.

3) Identify the levels and factors relating to group consensus.

4) Identify key organizational structure factors that could affect participation in distance education.

5) Identify key levels of respondent concern that could affect participation in distance education.

Population

The population for this study consisted of individuals from American public higher education institutions currently listed in the 2002–2003 AAAE Directory of University Faculty in Agricultural Education.
This was a descriptive study as described by Leedy (1997). According to Leedy, a descriptive study includes a carefully chosen population that is clearly defined and is specifically delimited. In total, 423 listed participants comprised the possible number of respondents. Of the 423 participants, 43 individuals were excluded from the population due to retirement, wrong address, or having identified themselves as not wanting to participate after they received the prenotification email. Respondents were given the option to not respond to the survey in the email. The revised population was recalculated to be 380. Of those respondents, 176 completed instruments were returned using either web-based submission or hardcopy mailed return resulting in an overall 46% return rate.

The participants in this study represent a specialized group, persons involved in the education of agriculture, and no sampling techniques were used. Therefore, the results of this study are limited to the population of the directory. However, the findings may be useful to other programs or other universities that desire to strengthen and/or expand their distance education programs.

Survey Design and Construction

The researcher chose to collect data using a questionnaire, which is an appropriate means of data collection for a descriptive study (Leedy, 1997). A questionnaire is an instrument for observing data beyond the physical reach of the observer.

The researcher chose to collect data from the individuals listed in the directory by utilizing a self-administered survey. Due to the geographical dispersion of the population, the researcher decided to use a web-based and universal postal return system. The population was first given the opportunity to respond to the web-based version. Those who did not want
to use the web-based version and specifically asked for the paper questionnaire were sent one day. In addition, the paper questionnaire was sent to all participants after the deadline submission for the web-based interactive form, excluding those individuals who specifically stated they did not want to participate in the survey or who were no longer at the institution.

This study was conducted utilizing descriptive statistics, a method for presenting quantitative description and distribution of variables (Agresti & Finlay, 1997). Fink and Kosecoff (1998) stated that descriptive statistics include frequencies, percentages, measures of central tendency (mean), and measures of variation (standard deviation). Gamma correlations were used to assess the relation between variables. These statistics were used in analyzing and displaying the data.

The survey instrument was developed for a large sample size and specific to a core group of individuals. Ary, Jacobs, and Razavieh (1996) stated that surveys are a system for collecting information by asking respondents questions or eliciting statements and one of the most frequently used methods of collecting data in research studies.

The researcher developed the self-developed survey based on statements and questions from two other surveys administered by Dr. Kristin Betts (1998), University of Arizona, and Dr. Zane Berge (2000), University of Maryland–College Park. To substantiate the selection of the statements, the researcher conducted a literature review to ascertain the relevance of each statement to recent findings from distance education studies conducted since 2000.
Construction and implementation of the web-based questionnaire

A web-based questionnaire was chosen to accomplish three tasks: 1) to reduce the costs of the study in the areas of printing and postage, 2) to provide a means for easy data collection where respondents could click and type their responses, and 3) to see what type of responses and comments would be made by the population in regards to a questionnaire administered via the Internet. The software used to design and administer the web-based questionnaire was Microsoft Word XP and Adobe Acrobat 5.0. The draft questionnaire was developed using the Microsoft software. Once the questionnaire was proofed for table construction and spell checked as well as other design processes and completed, it was converted using the Word installed Adobe PDF tool. After the conversion of the questionnaire, it was reviewed for misaligned table settings, word wraps, and other design issues. After the adjustments, the software program Adobe Acrobat 5.0 was used to add interactivity to the form.

To make the questionnaire interactive and to be able to submit it online, the researcher developed a web site. The site was placed on a server hosted by the Iowa State University College of Agriculture’s Computer Support Service. The link to the web page was http://ifafsnrep.ag.iastate.edu/paula/questionnaire.html. The first page of the site identified the protocol for completing the questionnaire. After reading the protocol, the respondents were provided a link to the actual questionnaire site at http://ifafsnrep.ag.iastate.edu/paula/finalquestionnaire.pdf. Respondents were able to “submit” the questionnaire by clicking the submit form button located at the end of the questionnaire. A reply screen showed the respondents their responses were sent to the researcher’s email address.
The completed questionnaires were sent to an email address other than the researcher’s university email address so that the questionnaire could be kept separate and also to ensure that all the questionnaires would be deleted in August 2003.

**Questionnaire design**

The survey consisted of four sections, the demographic information, and four open-ended questions, providing qualitative information. Below is a description of each section.

Section I, Distance Education/Technology, focused on participant adoption of distance education technology. The section asked for information whether participants had or had not taught a distance education course or used any type of technology in teaching face-to-face courses and it sought to identify those delivery computer and communication technologies participants had used as well as what method of delivery technologies or combination they found to be the most rewarding and efficient in course delivery from an instructor’s point of view. The section also asked if the respondent had a web site for one or more of his or her courses and asked which statement best described the current situation in regards to distance education using a modified version of Rogers, (1995) adoption level sequence. If the respondents had not taught a distance education course, they were asked if they saw themselves adopting distance education during the timeframe of one to ten years or never.

Section II, Organizational Structure, a four-point Likert scale, was used to assess participant perceptions. Likert scales assess attitudes toward a topic or concept by presenting a set of statements about it and asking respondents to indicate their responses (Ary, Jacobs & Razavieh, 1996). This section assessed respondents’ perceptions of their department, college, and institutional commitment level to distance education and promotion and tenure as well as
the organization culture (institution and agricultural education) as they are affected by
distance education. The following response options were used: 1 = Strongly disagree, 2 =
Disagree, 3 = Agree, and 4 = Strongly agree.

Section III, How I Feel about Distance Education, assessed respondent attitudes about
how distance education would affect or is affecting them. This section comprised statements
relating to organizational structure, culture, strategy, technology, and environment.
Responses to the four-point Likert scale were as follows: 1 = Definitely disagree, 2 =
Disagree, 3 = Agree, and 4 = Definitely agree.

Section IV, Looking Toward the Future, dealt with respondent beliefs about the
direction and future impact distance education would have on the agricultural education
profession. A set of four questions was asked to respondents the questions were: 1) In what
ways do you see distance education being used to address the needs of lifelong learning,
training, etc.? 2) What distance education trends do you foresee in agricultural education in
the next year? 3) What distance education trends do you foresee in agricultural education in
the next five years? and 4) What do you feel will have to happen at your institutional level to
make these trends a reality?

Section V, Demographic Information, provided general demographic information on all
respondents such as rank; appointment; division of current appointment; experience in
administration; years in administrative position; current status of present position; year
doctorate received; length of time in teaching position; and estimation of the number of
students instructed in an academic year consisting of undergraduate, graduate and non
formal/informal.
The Iowa State University Institutional Review Board approved the continuing review form on June 26, 2002 (Appendix A). A copy of the instrument used is provided in Appendix B.

**Pilot Test**

Using the questionnaires constructed by Betts and Berge, a sample questionnaire was developed. To assess the validity of the instrument, the degree to which a survey instrument assesses what it purports to measure, a panel of faculty and staff was selected using the procedures outlined by Ary, Jacobs, and Razavieh, (1996). A panel of ten faculty members/staff established content and face validity for the survey. Face validity offers proof that the survey instrument appears valid for its intended purposes, while content validity assesses whether the instrument items are appropriate (Ary, Jacobs & Razavieh, 1996).

After assessing the validity of the instrument, the survey was pilot-tested. The pilot test served as a review of the instrument prior to administration to the target population (Babbie, 1990). The pilot test was administered to faculty from the Colleges of Education, Business and Agriculture. These faculties were chosen based on their experience with distance education and organizations as well as familiarity with agricultural education. The small group allowed the researcher the opportunity to receive quantitative and qualitative feedback on the construction of the survey. As a result of the pilot test, minor changes in wording and organization were made to the survey.
Data Collection

After obtaining the 2002–2003 AAAE Directory of University Faculty in Agricultural Education, a prenotification email was sent to the targeted population to provide awareness to the study. The email also provided them an opportunity to respond to the web-based questionnaire. The prenotification email provided an explanation and purpose of the study, contact information, as well as the individual code number assigned to each listed member. In addition, the option for the member to not participate in the study was also provided. Refer to Appendix B for the prenotification email letter.

Following the prenotification email, it was discovered that the cgi processing company, Planet PDF, had made minor changes to their programming, thus rendering the pdf form unusable. Dr. W. Wade Miller, major professor and the researcher, made the determination that the form was unusable. This decision was made based on the pattern of responses from the Likert scale. A review of all the submissions found that the left column of part II and III was the only column marked in each questionnaire. These markings provided the impetus to conduct a further investigation, which encompassed assessing the respondent remarks from the open-ended questions, making phone calls, and submitting a trial form. It should be noted that the pilot test responses were reported in the correct manner. The programming switch came between the time of the pilot test and the date that the prenotification email was sent to the population.

Following the discovery of the programming error, the questionnaire was recoded and pilot-tested again to a group of five individuals with programming and computer backgrounds. The participants who originally responded to the web-based questionnaire were sent a follow-up email, approximately one month following the prenotification email, which
explained the problem and provided them a link to the site along with their code numbers. Previous web submittal respondents who chose not to use the web-based questionnaire asked for a paper version. The participants who did not respond to the prenotification were sent a personalized cover letter, approximately one month following the prenotification email, along with a paper version of the web-based questionnaire and a self-addressed stamped envelope. Participants were given two weeks to respond to the paper version. Follow-up emails were sent, approximately 7–10 days after the cover letter, and paper questionnaire were sent to the non-web-based participants. Approximately one week after the due date, 23 nonrespondents were contacted to test for nonrespondent bias. The nonrespondents were randomly drawn from a hat, which contained their identification numbers. Each individual was contacted by phone and was asked to answer two items from each section. No differences were observed between respondents and non-respondents. The return rate for the survey was 46% of the 380 useable surveys.

**Data Analysis**

The data collected from the participants were coded, entered, and analyzed by the researcher using SPSS Version 11.0. The statistical program SPSS is commonly used for social science research and was utilized to apply statistical methods to analyze the data and answer research questions of this study. The statistical procedures used to analyze the data included frequencies, percentages, means (independent sample), standard deviations, and correlation tests (Gamma). A significant value of .05 was determined a priori.

Open-ended questions were examined for common themes. Qualitative research is a multimethod approach involving interpretive and naturalistic approaches to analyze subject
matter (Denzin & Lincoln, 1998). According to Stake (1995), qualitative research can provide the means of understanding the subject through holistic means. Participants were asked to provide their thoughts, vision, and opportunities for distance education in the profession of agricultural education.

**Assumptions and Delimiters of the Study**

This study acknowledges the following assumptions:

1) The persons surveyed will answer the questionnaire completely and honestly.
2) The respondents have provided the researcher accurate and reliable information.
3) The instrument for data collection is valid.
4) There is a mixture of persons who hold or have held administrative positions.

This study acknowledges the following delimiters:

1) The study is limited to those persons who were listed in the *2002–2003 AAAE Directory of University Faculty in Agricultural Education*. (Persons listed in the directory are not all AAAE members).
2) Responses could be received from persons other than persons with university professorship appointments.
3) Those who are not involved directly with agricultural education may not want to fully complete the instrument.
4) Respondents could hold a bias for or against distance education initiatives.
5) Persons with an interest in distance education are more likely to complete the survey instrument.
CHAPTER IV. FINDINGS AND DISCUSSION

To reiterate, the purpose of this study is to determine the perceptions of agricultural educators toward the inclusion of distance education. The secondary purpose is to examine factors of organizational structure and faculty concerns and the inclusion of distance education in the mission, vision, and goals and the change process.

Again, the specific objectives of the study were to:

1) Establish a profile of listed respondents in the 2002–2003 American Association of Agricultural Educators (AAAE) Directory of University Faculty in Agricultural Education.

2) Examine the relationship of the mission, vision, and goal statements with statements of organizational structure and concern.

3) Examine the levels and factors relating to group consensus.

4) Identify key organizational structure factors that could affect participation in distance education.

5) Identify key levels of respondent concern that could affect participation in distance education.

To review, a descriptive survey was used in this study to collect data from listed persons in the 2002–2003 AAAE Directory of University Faculty in Agricultural Education. Data were collected using a modified survey instrument mailed to 423 individuals as identified in the official mailing list of the AAAE. Of the 423 instruments mailed, 43 instruments were returned because of unknown addresses, an unwillingness to participate, or no longer at the institution as a result of retirement or transfer. The total servable population
was 380. A total of 176 individuals (46%) in the accessible population contributed useable data for this study.

Objectives

1. Establish a profile of listed individuals in the 2002–2003 *American Association of Agricultural Educators (AAAE) Directory of University Faculty in Agricultural Education.*

   The purpose of this objective is to understand the composition of the group so that users may see how they or their departments compare to the group.

   This section describes the demographic characteristics of the respondents. Respondents answered questions of general information relating to rank, appointment percentage, division of current appointment, currently held administrative position, years of administration experience, tenured or nontenured status, years of teaching experience, and the average number of students instructed in an academic year.

Rank, tenure, and appointment overview

This section will examine the demographics, specific to rank, tenure, and appointment of the respondents. The survey demographics were separated by rank.

Data and findings

Table 1 reports that the largest respondent rank (38.5%) out of 171 respondents was "assistant professor." Second largest (32.1%) rank was "associate professor" with 19.9% of respondents indicating a rank of "professor." "Associate professor" and "professor"
Table 1. Rank and tenure status of respondents

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rank&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Adjunct/temporary faculty</td>
<td>8</td>
<td>4.7</td>
</tr>
<tr>
<td></td>
<td>Instructor</td>
<td>8</td>
<td>4.7</td>
</tr>
<tr>
<td></td>
<td>Assistant professor</td>
<td>66</td>
<td>38.6</td>
</tr>
<tr>
<td></td>
<td>Associate professor</td>
<td>55</td>
<td>32.1</td>
</tr>
<tr>
<td></td>
<td>Professor</td>
<td>34</td>
<td>19.9</td>
</tr>
<tr>
<td>Tenure&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Self-reported tenure track</td>
<td>44</td>
<td>26.3</td>
</tr>
<tr>
<td></td>
<td>Self-reported tenured</td>
<td>102</td>
<td>61.1</td>
</tr>
<tr>
<td></td>
<td>Self-reported neither</td>
<td>21</td>
<td>12.6</td>
</tr>
</tbody>
</table>

<sup>a</sup>Number of respondents = 171.

<sup>b</sup>Number of respondents = 167.

accounted for over one-half (50.6%) of the 171 responses. "Adjunct/temporary faculty" and "instructors" accounted for 9.0% of the 171 responses.

Data reported in Tables 1 and 2 show 149 respondents indicated having achieved the rank of professor after receiving their doctorate between the period of 1960–1990. The majority of 149 respondents (29.5%) reported receiving their doctorate during the time period of 1981–1990. Within that decade, 21.3% of the 149 respondents reported having the rank of "associate professor" and "professor." The preceding decade also had a significant percentage (18.3%) of 149 respondents who reported their rank of "associate professor" or "professor." In summary, these respondents represent at least one-half (50.6%) of the 149 respondents who indicated a rank of "associate professor" or "professor."
Table 2. Frequency and percentage of respondents by time period for receiving rank

<table>
<thead>
<tr>
<th>Time period</th>
<th>Rank</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960–1970</td>
<td>Adjunct/temporary faculty</td>
<td>1</td>
<td>.6</td>
</tr>
<tr>
<td></td>
<td>Instructor</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Assistant professor</td>
<td>1</td>
<td>.6</td>
</tr>
<tr>
<td></td>
<td>Associate professor</td>
<td>4</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>Professor</td>
<td>6</td>
<td>3.8</td>
</tr>
<tr>
<td>1971–1980</td>
<td>Adjunct/temporary faculty</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Instructor</td>
<td>1</td>
<td>.6</td>
</tr>
<tr>
<td></td>
<td>Assistant professor</td>
<td>5</td>
<td>3.1</td>
</tr>
<tr>
<td></td>
<td>Associate professor</td>
<td>16</td>
<td>10.1</td>
</tr>
<tr>
<td></td>
<td>Professor</td>
<td>13</td>
<td>8.2</td>
</tr>
<tr>
<td>1981–1990</td>
<td>Adjunct/temporary faculty</td>
<td>2</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>Instructor</td>
<td>1</td>
<td>.6</td>
</tr>
<tr>
<td></td>
<td>Assistant professor</td>
<td>14</td>
<td>8.8</td>
</tr>
<tr>
<td></td>
<td>Associate professor</td>
<td>19</td>
<td>11.9</td>
</tr>
<tr>
<td></td>
<td>Professor</td>
<td>15</td>
<td>9.4</td>
</tr>
<tr>
<td>1991–2000</td>
<td>Adjunct/temporary faculty</td>
<td>1</td>
<td>.6</td>
</tr>
<tr>
<td></td>
<td>Instructor</td>
<td>1</td>
<td>.6</td>
</tr>
<tr>
<td></td>
<td>Assistant professor</td>
<td>36</td>
<td>22.6</td>
</tr>
<tr>
<td></td>
<td>Associate professor</td>
<td>13</td>
<td>8.2</td>
</tr>
<tr>
<td></td>
<td>Professor</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2001–</td>
<td>Adjunct/temporary faculty</td>
<td>1</td>
<td>.6</td>
</tr>
<tr>
<td></td>
<td>Instructor</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Assistant professor</td>
<td>9</td>
<td>5.7</td>
</tr>
<tr>
<td></td>
<td>Associate professor</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Professor</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Table 3 shows the appointment percentage by appointment type. Respondents were asked to identify the distribution of their appointment in the areas of research, teaching, extension, and administration. Not all respondents indicated an appointment in each area.

Based on the total number of respondents (n = 176) the largest appointment time (83.9%) is assigned to “teaching.” The second largest response (44.3%) was in “research” and 39.8% respondents reported having an “extension” appointment. Respondents with a component of their appointment in “administration” comprised 21.6% of the total responses.

Within the appointment type “teaching,” over one-half (57.4%) of the 146 actual respondents indicated having an appointment percentage (57.4%) ranging from 51–100%. Forty-five respondents (30.8%) indicated a teaching appointment of 49% or less.

Seventy-eight respondents indicated having a research appointment. Of those, 65.4% indicated an appointment range from 0–25%. Appointments ranging from 26–50% accounted for 29.5% of the reported response (n = 78). Four respondents (5.2%) indicated an appointment greater than 51%.

Over one-third (39.8%) of actual respondents (n = 70) reported having an extension appointment. One-half of the respondents (n = 35) reported an appointment of 0–25%. Appointments ranging from 26–50% accounted for 22.9% of the reported response (n = 70). Nineteen respondents (27.1%) indicated an appointment greater than 51% dedicated to outreach functions.

Thirty-eight respondents indicated having “administrative” appointments, which accounted for 21.6% of the total number of possible responses (n = 176). The largest appointment range was 0–25% with 14 respondents (36.8%). The second highest
Table 3. Frequency and percentage of respondent by appointment percentage and type

<table>
<thead>
<tr>
<th>Type</th>
<th>Appointment percentage</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research (n=78)</td>
<td>0-25%</td>
<td>51</td>
<td>65.4</td>
</tr>
<tr>
<td></td>
<td>26-50%</td>
<td>23</td>
<td>29.5</td>
</tr>
<tr>
<td></td>
<td>51-75%</td>
<td>2</td>
<td>2.6</td>
</tr>
<tr>
<td></td>
<td>76-100%</td>
<td>2</td>
<td>2.6</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>78</td>
<td>100.0</td>
</tr>
<tr>
<td>Teaching (n=146)</td>
<td>0-25%</td>
<td>20</td>
<td>13.7</td>
</tr>
<tr>
<td></td>
<td>26-50%</td>
<td>25</td>
<td>17.1</td>
</tr>
<tr>
<td></td>
<td>51-75%</td>
<td>50</td>
<td>34.2</td>
</tr>
<tr>
<td></td>
<td>76-100%</td>
<td>51</td>
<td>34.9</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>146</td>
<td>100.0</td>
</tr>
<tr>
<td>Extension (n=70)</td>
<td>0-25%</td>
<td>35</td>
<td>50.0</td>
</tr>
<tr>
<td></td>
<td>26-50%</td>
<td>16</td>
<td>22.9</td>
</tr>
<tr>
<td></td>
<td>51-75%</td>
<td>8</td>
<td>11.4</td>
</tr>
<tr>
<td></td>
<td>76-100%</td>
<td>11</td>
<td>15.7</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>70</td>
<td>100.0</td>
</tr>
<tr>
<td>Administration (n=38)</td>
<td>0-25%</td>
<td>14</td>
<td>36.8</td>
</tr>
<tr>
<td></td>
<td>26-50%</td>
<td>6</td>
<td>15.8</td>
</tr>
<tr>
<td></td>
<td>51-75%</td>
<td>7</td>
<td>18.4</td>
</tr>
<tr>
<td></td>
<td>76-100%</td>
<td>11</td>
<td>28.9</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>38</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*a78 persons responded out of 176 including 98 missing cases.
*b146 persons responded out of 176 including 30 missing cases.
*c70 persons responded out of 176 including 106 missing cases.
*d38 persons responded out of 176 including 138 missing cases.
percentage (28.9%) was reported for appointments of 76–100%. Appointment percentages between 26–75% accounted for 34.2% of the actual respondents.

**Administration overview**

This section will examine the administrative demographics of the respondents. The survey demographics were separated into categories of department head and college administration. Analyses were conducted based on those respondents who reported having an academic rank (instructor, adjunct instructor, assistant professor, associate professor, and professor).

**Data and findings**

Figure 4 shows that out of the possible 174 respondents, 17.6% of respondents (n = 30) reported being a “department chair,” and 20 respondents (11.4%) reported they were employed in some capacity at the “college administration” level.

Within the classification of “department chair” the most frequent rank (n = 14) was “associate professor,” followed by “professor” with 8 respondents. Six “assistant professors” indicated holding the position of “department chair” with one respondent in each classification of “adjunct/temporary faculty” and “instructor.”

The largest number of respondents (n = 9) holding college administration positions were from the rank of “professor.” Seven “associate professors” and two “assistant professors” reported having some type of position within college administration.
Teaching experience overview

This section reports the length of time respondents had been in a teaching position and the average number of students, undergraduate, graduate, and nonformal, instructed during an academic year.

Data and findings

Respondents were asked to state the exact number of years that they had been in a teaching position. These findings are reported in Table 4. Fifty-four respondents indicated a range of 0–10 years, which accounted for 30.7% of the total 166 responses. Respondents with more than 20 years of experience accounted for 36.4% of the 166 responses. The average number of reported teaching years was 18.0 years with a standard deviation of 11.5 years.
Table 5 presents the average number of students (undergraduate, graduate, and nonformal) instructed during an academic year. Of the possible 176 respondents, a total of 144 respondents instructed undergraduates, 145 instructed graduate level students, with 71 respondents interacting with nonformal learners during an academic year.

Table 4. Frequency of respondents in a teaching position by group year (n = 166)

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group Years</td>
<td>0–10 years</td>
<td>54</td>
<td>30.7</td>
</tr>
<tr>
<td></td>
<td>11–20 years</td>
<td>48</td>
<td>27.3</td>
</tr>
<tr>
<td></td>
<td>21–30 years</td>
<td>33</td>
<td>18.8</td>
</tr>
<tr>
<td></td>
<td>31–40 years</td>
<td>27</td>
<td>15.3</td>
</tr>
<tr>
<td></td>
<td>41–50 years</td>
<td>4</td>
<td>2.3</td>
</tr>
</tbody>
</table>

The rank of associate professor had the largest means in undergraduate, graduate, and non-formal contact: 229.6, 46.4 and 928.0, respectively. Respondents in the rank of instructor had the second highest undergraduate mean (155.7). The third highest mean (145.1) for the number of undergraduates instructed in an academic year were respondents from the rank of assistant professor. The rank of assistant professor also had the second highest graduate mean (33.3) and second highest mean (449.5) for non-formal contact.

Technology usage overview

This section examines the types and frequencies of different technologies reported by respondents. This section presents the following: 1) number of respondents having taught at a
Table 5. Average number of students instructed in an academic year by rank

<table>
<thead>
<tr>
<th>Item</th>
<th>Rank</th>
<th>Description</th>
<th>n</th>
<th>Mean</th>
<th>Std. dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rank</td>
<td>Adjunct/temporary faculty</td>
<td>Undergraduate</td>
<td>7</td>
<td>67</td>
<td>30.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Graduate</td>
<td>8</td>
<td>19.9</td>
<td>6.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Non-formal</td>
<td>1</td>
<td>350</td>
<td>0.0</td>
</tr>
<tr>
<td>Instructor</td>
<td>Undergraduate</td>
<td>7</td>
<td>155.7</td>
<td>65.8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Graduate</td>
<td>1</td>
<td>1</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non-formal</td>
<td>2</td>
<td>55.0</td>
<td>63.6</td>
<td></td>
</tr>
<tr>
<td>Assistant professor</td>
<td>Undergraduate</td>
<td>59</td>
<td>145.1</td>
<td>263.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Graduate</td>
<td>62</td>
<td>33.3</td>
<td>44.8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non-formal</td>
<td>28</td>
<td>449.5</td>
<td>886.3</td>
<td></td>
</tr>
<tr>
<td>Associate professor</td>
<td>Undergraduate</td>
<td>45</td>
<td>229.6</td>
<td>882.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Graduate</td>
<td>41</td>
<td>46.4</td>
<td>69.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non-formal</td>
<td>24</td>
<td>928.0</td>
<td>3650.7</td>
<td></td>
</tr>
<tr>
<td>Professor</td>
<td>Undergraduate</td>
<td>25</td>
<td>85.2</td>
<td>85.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Graduate</td>
<td>32</td>
<td>32.0</td>
<td>24.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non-formal</td>
<td>15</td>
<td>101.6</td>
<td>137.0</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>Undergraduate</td>
<td>144</td>
<td>157.9</td>
<td>523.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Graduate</td>
<td>145</td>
<td>35.8</td>
<td>49.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non-formal</td>
<td>71</td>
<td>526.3</td>
<td>2204.2</td>
<td></td>
</tr>
</tbody>
</table>

distance, 2) number of respondents who have used technology in teaching a face-to-face course, 3) the type of delivery technologies used by respondents, and 4) if respondents have a course web site.

Data and findings

According to Table 6, 53.8% (n = 92) of the total possible respondents (n = 171) indicated that they had “taught a distance education course.” The highest percentage (39.1%)
of the 92 who indicated that they had taught a distance education course reported their rank as “assistant professor.” This finding was closely followed by the rank of “associate professor” with 33.7%. Respondents who hold the rank of adjunct/temporary faculty and instructor accounted for less than one-tenth (8.7%) of the 92 respondents who had taught a distance education course.

The largest number (n = 30) of respondents who indicated they had not taught a distance education course was from the rank of assistant professor (38.0%). This was closely followed by 24 (30.4%) associate professors who also indicated not having taught a distance education course. Twenty-one percent (n = 17) of professors had not taught a distance education course.

Table 6. Frequency of respondents who have taught a distance education course by rank (n=171)

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rank</td>
<td>Adjunct/temporary faculty</td>
<td>6</td>
<td>6.5</td>
</tr>
<tr>
<td></td>
<td>Instructor</td>
<td>2</td>
<td>2.2</td>
</tr>
<tr>
<td></td>
<td>Assistant professor</td>
<td>36</td>
<td>39.1</td>
</tr>
<tr>
<td></td>
<td>Associate professor</td>
<td>31</td>
<td>33.7</td>
</tr>
<tr>
<td></td>
<td>Professor</td>
<td>17</td>
<td>18.5</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>92</td>
<td></td>
</tr>
</tbody>
</table>

Table 7 shows the number of respondents who hold an academic rank and their adoption of technology in face-to-face courses. Of the 170 respondents, 38.8% of assistant professors currently utilized technology in their face-to-face courses followed by 31.2% of associate professors. Less than one-fifth of respondents (18.8%) reported their rank as
professor. Respondents holding the ranks of adjunct/temporary and instructor accounted for 8.8% of the “yes” responses. Only four respondents indicated they did not use technology in their face-to-face courses.

Table 8 shows the frequency of technology usage by all 176 respondents. The majority of respondents, 132 out of 176 responses (75.0%), indicated using the “WWW/Internet” for education delivery. Slightly more than seven out of ten respondents (71.0%) indicated they used “Videotape” delivery. The third highest (55.1%) technological usage was “CD-ROM.”

The least-used technologies were “cassette” (82.4%) followed by “correspondence” (72.7%). One-quarter of the respondents indicated they did not use the “WWW/Internet” and less than three out of ten respondents (29.0%) did not use “videotape.”

Table 7. Frequency of respondents who use technology in face-to-face courses by rank (n = 170)

<table>
<thead>
<tr>
<th>Item</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Rank</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjunct/temporary faculty</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Instructor</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Assistant professor</td>
<td>66</td>
<td>0</td>
</tr>
<tr>
<td>Associate professor</td>
<td>53</td>
<td>2</td>
</tr>
<tr>
<td>Professor</td>
<td>32</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>166</td>
<td>4</td>
</tr>
</tbody>
</table>
Table 8. Number of respondents who use technology in face to face courses by technology type (n = 176)

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Type</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Videotape</td>
<td></td>
<td>125</td>
<td>51</td>
</tr>
<tr>
<td>Satellite</td>
<td></td>
<td>65</td>
<td>111</td>
</tr>
<tr>
<td>CD ROM</td>
<td></td>
<td>97</td>
<td>79</td>
</tr>
<tr>
<td>Videoconferencing</td>
<td></td>
<td>67</td>
<td>109</td>
</tr>
<tr>
<td>Two-way Conferencing</td>
<td></td>
<td>86</td>
<td>90</td>
</tr>
<tr>
<td>Correspondence</td>
<td></td>
<td>48</td>
<td>128</td>
</tr>
<tr>
<td>Cassette</td>
<td></td>
<td>31</td>
<td>145</td>
</tr>
<tr>
<td>WWW/Internet</td>
<td></td>
<td>132</td>
<td>44</td>
</tr>
<tr>
<td>Course web site</td>
<td></td>
<td>107</td>
<td>68</td>
</tr>
</tbody>
</table>

Adoption overview

This section reports two aspects of distance education adoption. First is the respondent level of distance education adoption at the time of the study, December 2002 to January 2003. The second is the number of years before those respondents who had not adopted distance education would be adopting. Five modified statements directly related to the Rogers (1995) categories of adoption are given below with their corresponding adoption category labels.

1) I need long periods of deliberation before I would teach at a distance (early majority).

2) I will wait until distance education is a matter of academic or professional necessity (skeptical).

3) I am suspicious of all new technology innovations (laggard).
4) I am willing to teach at a distance but need to think through my actions (early adopter).

5) I am willing to be the leader in distance education (innovator).

Data and findings

Table 9 shows an overwhelming percentage (54.2%) of the 166 respondents to be “willing to teach at a distance but need to think through their actions.” Over one-quarter (29.5%) of the responses indicated they were “willing to be a leader in distance education.” Only one respondent indicated “suspicious of all new technological innovations.” A significant drop to the third highest level (9.6%), “will wait until distance education is a matter of academic or professional necessity,” was reported. Those respondents who indicated “need long periods of deliberation before I would teach at a distance” accounted for 6.0% of the respondents.

Table 10 shows that respondents who are willing to adopt distance education in the next “two years” account for 26.3% of the respondent pool (n = 62). Within the first year, 11.5% of the respondents (n = 14) indicated they would be adopting distance education. This is followed by a significant time increase to “5 years” with 17.3% of the respondents reporting their willingness to adopt distance education. Five respondents (4.1%) indicated they would “never” adopt distance education.
### Table 9. Level of current distance education adoption (n = 166)

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statement</td>
<td>Need long periods of deliberation before I would teach at a distance. (Early majority)</td>
<td>10</td>
<td>6.0</td>
</tr>
<tr>
<td>Statement</td>
<td>Will wait until distance education is a matter of academic or professional necessity. (Skeptical)</td>
<td>16</td>
<td>9.6</td>
</tr>
<tr>
<td>Statement</td>
<td>Suspicious of all new technology innovations. (Laggard)</td>
<td>1</td>
<td>.6</td>
</tr>
<tr>
<td>Statement</td>
<td>Willing to teach at a distance but need to think through my actions. (Early adopter)</td>
<td>90</td>
<td>54.2</td>
</tr>
<tr>
<td>Statement</td>
<td>Willing to be a leader in distance education. (Innovator)</td>
<td>49</td>
<td>29.5</td>
</tr>
</tbody>
</table>

### Table 10. Number of years till adoption of distance education (n=62)

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>Less than 1 year</td>
<td>6</td>
<td>4.9</td>
</tr>
<tr>
<td>Time</td>
<td>1 year</td>
<td>8</td>
<td>6.6</td>
</tr>
<tr>
<td>Time</td>
<td>2 years</td>
<td>18</td>
<td>14.8</td>
</tr>
<tr>
<td>Time</td>
<td>3 years</td>
<td>8</td>
<td>6.6</td>
</tr>
<tr>
<td>Time</td>
<td>4 years</td>
<td>3</td>
<td>2.5</td>
</tr>
<tr>
<td>Time</td>
<td>5 years</td>
<td>10</td>
<td>8.2</td>
</tr>
<tr>
<td>Time</td>
<td>7 years</td>
<td>3</td>
<td>2.5</td>
</tr>
<tr>
<td>Time</td>
<td>9 years</td>
<td>1</td>
<td>.8</td>
</tr>
<tr>
<td>Time</td>
<td>Never</td>
<td>5</td>
<td>4.1</td>
</tr>
</tbody>
</table>
Using the adopter categories as a divide, Table 11 shows that the largest frequency (n = 16) of respondents stated that they were willing to teach at a distance but needed to think through their actions and indicated that they would adopt distance education in two years. Almost 25.6% of respondents who stated that they were willing to teach at a distance or indicated that they were a leader in distance education accounted for almost 27.2% of respondents who plan to implement distance education within the next two years.

Table 11. Current level of adoption by number of years till adoption (n = 116)

<table>
<thead>
<tr>
<th>Description</th>
<th>1&lt;sup&gt;a&lt;/sup&gt;</th>
<th>2&lt;sup&gt;b&lt;/sup&gt;</th>
<th>3&lt;sup&gt;c&lt;/sup&gt;</th>
<th>4&lt;sup&gt;d&lt;/sup&gt; (%)</th>
<th>5&lt;sup&gt;e&lt;/sup&gt; (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 year</td>
<td>5 (4.3)</td>
<td>1 (0.80)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 year</td>
<td>1 (0.80)</td>
<td></td>
<td>3 (2.5)</td>
<td>4 (3.4)</td>
<td></td>
</tr>
<tr>
<td>2 years</td>
<td></td>
<td>1 (0.80)</td>
<td></td>
<td>16 (13.8)</td>
<td>1 (0.80)</td>
</tr>
<tr>
<td>3 years</td>
<td>1 (0.80)</td>
<td></td>
<td>6 (5.2)</td>
<td>1 (0.80)</td>
<td></td>
</tr>
<tr>
<td>4 years</td>
<td>1 (0.80)</td>
<td></td>
<td>2 (1.7)</td>
<td>1 (0.80)</td>
<td></td>
</tr>
<tr>
<td>5 years</td>
<td>1 (0.80)</td>
<td>5 (4.3)</td>
<td></td>
<td>2 (1.7)</td>
<td>1 (0.80)</td>
</tr>
<tr>
<td>7 years</td>
<td>1 (0.80)</td>
<td></td>
<td></td>
<td>1 (0.80)</td>
<td>1 (0.80)</td>
</tr>
<tr>
<td>9 years</td>
<td></td>
<td>1 (0.80)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td>3 (2.6)</td>
<td>1 (0.80)</td>
<td></td>
<td>1 (0.80)</td>
<td></td>
</tr>
<tr>
<td>Not applicable</td>
<td>4 (3.4)</td>
<td>4 (3.4)</td>
<td></td>
<td>26 (22.4)</td>
<td>21 (18.1)</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>14</td>
<td>1</td>
<td>62</td>
<td>30</td>
</tr>
</tbody>
</table>

<sup>a</sup>1 = "I will need long periods of deliberation before I would teach at a distance."
<sup>b</sup>2 = "I will wait until distance education is a matter of academic or professional necessity."
<sup>c</sup>3 = "I am suspicious of all new technology innovations."
<sup>d</sup>4 = "I am willing to teach at a distance but need to think through my actions."
<sup>e</sup>5 = "I am willing to be the leader in distance education."
2. Examine the relationships of the mission, vision, and goal statements with statements of organizational structure and concern.

A review of literature (Hanna, 2003; Hanna, 2000b; Bates, 2000; Murphy & Terry, 1998a; and Wolcott, 1997) indicates the necessity to begin to discern a clear understanding of the vision, mission, and goals of the institution as they interrelate with distance education. The Kellogg Report (1999) supports the review of literature with its emphasis on the mission, vision, and goals of higher education and the reengagement of the lifelong learner. In the discipline of agricultural education, Murphy and Terry (1998a) stated there is a need to discern the factors that relate to the mission, vision, and goals involved in distance education initiatives within the profession of agricultural education.

Correlation coefficients were computed using the statistical test appropriate for the data analyzed. For reporting purposes, the Gamma correlation analysis was selected as it provides for a more liberal calculation between the variables. The correlation degree of relationship was described by the scale developed by Davis (1971) and is as follows:

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>.70 or higher</td>
<td>Very strong relationship</td>
</tr>
<tr>
<td>.50 - .69</td>
<td>Substantial relationship</td>
</tr>
<tr>
<td>.30 - .49</td>
<td>Moderate relationship</td>
</tr>
<tr>
<td>.10 - .29</td>
<td>Low relationship</td>
</tr>
<tr>
<td>.01 - .09</td>
<td>Negligible relationship</td>
</tr>
</tbody>
</table>

In analyzing the data, the following statement by Leedy provided the basis for interpreting the results. Leedy (1997) stated that figures do not lie; however, the causal assumption we make to the figures, at times, may be extremely circumspect. He further stated that below the correlation lies a universe of data whose interpretation may lead to new and exciting information. The intent of the researcher is to use the correlation coefficient not
as a means of establishing causal assumption but as a means of providing a direction for further research.

In answering this objective, two parts of the survey were utilized, part II (p. 124) and III (p. 125). Each part used a four-point Likert response scale; however, each part had a different response scale. Part II responses were based on the scale and coded into SPSS as follows: 1- definitely disagree, 2- disagree, 3- agree and 4 – definitely agree. Part III statements used the following scale: 1- Strongly disagree, 2- disagree, 3- agree, and 4 – strongly agree.

Statements were selected from two parts of the survey and were chosen if the terms vision, mission, and goal were used in the statement. One statement from part II of the survey referenced the traditional land-grant mission. Three statements from part III contained the terms vision, mission, and goals.

Part II contains 23 statements of which 8 statements had Gamma correlations of .30 or greater. Forty-four statements from part III were used in calculating the correlation statements.

Mission and distance education

Seven statements, in Table 12, reported having a moderate to substantial relationship to the statement, “The traditional land-grant mission of teaching, research, and extension can be enhanced through distance education.” The data indicated that a substantial relationship existed between the mission statement and “distance education can stimulate a change in educational strategies within the AgEd profession” (.64) or “higher education must change how they do business to meet the needs of the lifelong learner” (.63).
Table 12. Relationship between "The traditional land-grant mission of teaching, research, and extension can be enhanced through distance education" and selected organization structure statements

<table>
<thead>
<tr>
<th>Statement</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance education can stimulate a change in educational strategies within the AgEd profession.</td>
<td>.64</td>
</tr>
<tr>
<td>Higher education must change how they do business to meet the needs of the lifelong learner.</td>
<td>.63</td>
</tr>
<tr>
<td>My department believes distance education is able to address the societal needs of lifelong learning.</td>
<td>.54</td>
</tr>
<tr>
<td>I am one of the most adaptive persons in my department when it comes to meeting the challenges of using technology.</td>
<td>.54</td>
</tr>
<tr>
<td>Distance education efforts are compatible with the norms and values of my department.</td>
<td>.52</td>
</tr>
<tr>
<td>Faculty are the most valuable resource in my department's distance education efforts.</td>
<td>.41</td>
</tr>
<tr>
<td>My department has increased its efforts in strengthening distance education initiatives each year.</td>
<td>.42</td>
</tr>
</tbody>
</table>

According to York (2000), the traditional land-grant mission was created so all persons would be able to lift themselves out of the economic status into which they were born. This mission was achieved through outreach activities designed to address the needs of society and delivered by professors off and on campus. In more recent times, the Kellogg Report (1999) encouraged higher education to "employ the latest technologies and 'distance-learning' technique to make sure that students who are isolated, home-bound, or tied down..."
by obligations to family or employers can pursue the dream of a college education and have access to lifelong learning for personal enrichment and career development” (p. 23).

Today, a renewed emphasis on the mission, vision, and goals in public higher education, not just the land-grant institutions, is being called for by stakeholders internal and external to the institution. As a means of renewing the covenant with the American people, the Kellogg Report (1999) called for the return to the original intent of the land-grant mission by making lifelong learning a major part of the core institutional mission through the creation of new kinds of learning environment to meet changing societal needs. The report emphasized replacement of the passive modes of instruction. Bates (2000) stated that the innovativeness of distance education has created the opportunity for pedagogical change. Findings from Table 12 imply that a relationship exists between the mission statement and stimulating a change in educational strategies within the agricultural education profession.

The traditional land-grant mission was created as a means of expanding opportunities for higher education separate from the European-based elitist colleges and universities. It was not until the late 1920s that these same elitist universities also realized that their standards, which catered to the aristocrat, were costing them students. As a result, they changed their admission standards and outreach agendas to increase the student enrollment. The land-grant mission also altered the type of available education from liberal arts to the array of liberal arts, sciences, business, engineering, and agriculture currently found in higher education today. Mouton and Killingsworth (1995) stated that the factors causing public higher education to rethink its mission are the accusations that: 1) higher education is not being responsive to societal needs, 2) public reaction is negative to rising costs and perceived declining quality of higher education and 3) the decrease in funding for both education and
research is decreasing. Therefore, the relationship between the mission statement and how higher education is changing their business practices to meet the needs of the lifelong learner does not come as a surprise. At the departmental level, findings imply that a moderate relationship is supported through the strengthening of distance education initiatives each year. Distance education is seen as a means of changing the way business is done (Wolcott, 1997); therefore, the increase of distance education initiatives can be seen as a means of change.

Higher education has been in the process of change for decades; however, distance education has been identified as a catalyst for the enhancement of the traditional land-grant mission in today’s environment (Wolcott, 1997) much like the distance education efforts evidenced by the Corn Train of the early Extension Service (Rogers, 1995).

Table 13 reports sixteen statements taken from part III of the survey, which demonstrated a Gamma correlation of .30 or higher. In response to the correlation statement, “I am concerned if a clear understanding exists about distance education in the overall mission of the institution,” two statements demonstrated a substantial relationship. The statement recording the highest Gamma correlation (.66) was between the overall mission and “I am concerned about the support and encouragement from institutional administrators.” The second highest correlation (.65) was in response to the statement, “I am concerned about the institution’s ability to react to environmental changes needed in the organizational structure to delivery distance education.”

The mission guides the internal and external actions of the institution. Mission statements are filled with good intentions. Never does a mission statement indicate what the
Table 13. Relationship between “I am concerned if a clear understanding exists about distance education in the overall mission of the institution” and selected statement of concern

<table>
<thead>
<tr>
<th>I am concerned about...</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>The support and encouragement from institutional administrators.</td>
<td>.66</td>
</tr>
<tr>
<td>The institution’s ability to react to environmental changes needed in the organizational structure to delivery distance education.</td>
<td>.65</td>
</tr>
<tr>
<td>My institution not committing enough resources for a quality distance education program.</td>
<td>.60</td>
</tr>
<tr>
<td>The lack of collaboration among various disciplines and institutions in distance education.</td>
<td>.60</td>
</tr>
<tr>
<td>How my colleagues outside the department will view distance education efforts.</td>
<td>.59</td>
</tr>
<tr>
<td>Resistance to change by administrators.</td>
<td>.57</td>
</tr>
<tr>
<td>Slow implementation of distance education.</td>
<td>.55</td>
</tr>
<tr>
<td>My administrator’s idea of what it takes to have a quality distance education course.</td>
<td>.50</td>
</tr>
<tr>
<td>Acquiring release time from existing duties to develop distance education courses.</td>
<td>.46</td>
</tr>
<tr>
<td>Support and encouragement from the dean or chair to teach at a distance.</td>
<td>.46</td>
</tr>
<tr>
<td>The expectation by higher-level administration that faculty engage in distance education as an add-on responsibility.</td>
<td>.45</td>
</tr>
<tr>
<td>Monetary support for participation (i.e., stipend, overload).</td>
<td>.45</td>
</tr>
<tr>
<td>Availability of assistance to develop curriculum for distance education.</td>
<td>.45</td>
</tr>
<tr>
<td>My overall job satisfaction.</td>
<td>.45</td>
</tr>
<tr>
<td>How my department will consider distance education efforts in my review.</td>
<td>.44</td>
</tr>
<tr>
<td>My ability to change from F-2-F teaching to teaching at a distance.</td>
<td>.43</td>
</tr>
</tbody>
</table>
institution is not capable of delivering. It is a vehicle to inform the world what it values and believes; it is the means by which external partnerships can be established (Kotter, 2002).

One of the internal functions of the overall mission is to act as a determinant for change. The faculty reward system, specifically promotion and tenure, is a political arena in which the overall mission commonly finds itself (Wolcott, 1997). The mission is rarely used as the sole mean of devising resource allocation. However, it does provide the means by which administration communicates its intentions regarding resources.

Findings from Table 13 imply that the concern about support and encouragement from institutional administrators, deans, or chair has a substantial link in understanding the existence of distance education to the overall mission. This support and encouragement are critical in the continuation or initiation of programmatic efforts (Robbins, 1990).

Findings also support the exploration between the roles of distance education in the overall mission and concerns about the institution’s ability to react to environmental changes needed in the organizational structure to deliver distance education. Findings contradict the statement that the overall mission is a means of devising resource allocation. A relationship between the understanding of distance education existence in the overall mission and the following concerns: 1) the institution is not committing enough resources for a quality distance education program, 2) monetary support for participation is not available, and 3) acquiring release time and the expectation by higher level administration that faculty engage in distance education as an add-on responsibility indicates the need for in-depth exploration regarding resource allocation.

The overall mission is primarily a means of communicating to the external world the intentions, values, and beliefs of the institution (Hanna, 2000b). Relationships exist between
understanding the role of distance education in the overall mission and concern for external activity such as collaboration and peer comments from outside the department.

**Shared vision and distance education**

Table 14 identifies the 15 statements taken from a set of statements focusing on organizational structure, which had correlations of .30 or above. A very strong correlation (.71) was reported between the statements and the correlation statement, "I am concerned about whether a shared vision exists for distance education" and "I am concerned about my institution not committing enough resources for a quality distance education program."

Klevans (2000) stated that the vision of distance education should be an integral part of the mission of higher education. The vision shows an end state where all the plans and strategies will eventually lead (Kotter, 2002). When the vision fails or is misunderstood, it is more from a lack of clarity than from people not believing in its worth (Kotter, 2002). He further states that the public has been raised in an era of incremental change, with little vision and strategy communication required. From that standpoint, what is needed now, with the renewed commitment, can seem quite logically like a burden to the organizational structure. But in today’s rapid environment and without a clear understanding of the vision, the possibility of a chaotic state is probable.

Findings from Table 14 imply relationships exist between a clear understanding of the vision and resource allocations such as release time, monetary support for participation, technical assistance, and the institutions commitment to enough resources for a quality distance education program. Klevans (2000) stated that the vision of distance education should be a key component in the institution’s overall goals of improving the teaching and
Table 14. Relationship between “I am concerned about whether a shared vision exists for distance education” and selected statements of concern

<table>
<thead>
<tr>
<th>I am concerned about…</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>My institution not committing enough resources for a quality distance education program.</td>
<td>.71</td>
</tr>
<tr>
<td>The support and encouragement from institutional administrators.</td>
<td>.68</td>
</tr>
<tr>
<td>Monetary support for participation (i.e. stipend, overload).</td>
<td>.59</td>
</tr>
<tr>
<td>The institution’s ability to react to environmental changes needed in the organizational structure to delivery distance education.</td>
<td>.58</td>
</tr>
<tr>
<td>The expectation by higher level administration that faculty engage in distance education as an add-on responsibility.</td>
<td>.58</td>
</tr>
<tr>
<td>The lack of collaboration among various disciplines and institutions in distance education.</td>
<td>.53</td>
</tr>
<tr>
<td>Acquiring release time from existing duties to develop distance education courses.</td>
<td>.52</td>
</tr>
<tr>
<td>Resistance to change by administrators.</td>
<td>.49</td>
</tr>
<tr>
<td>How my colleagues outside the department will view distance education efforts.</td>
<td>.49</td>
</tr>
<tr>
<td>Slow implementation of distance education.</td>
<td>.49</td>
</tr>
<tr>
<td>Support and encouragement from the dean or chair to teach at a distance.</td>
<td>.49</td>
</tr>
<tr>
<td>The opportunity to develop new ideas using distance education.</td>
<td>.47</td>
</tr>
<tr>
<td>Availability of assistance to develop curriculum for distance education.</td>
<td>.47</td>
</tr>
<tr>
<td>The quality image of distance education courses as perceived by students.</td>
<td>.46</td>
</tr>
<tr>
<td>The availability of technical support.</td>
<td>.45</td>
</tr>
</tbody>
</table>
learning process and a significant component of the teaching, learning, and administrative environments of the twenty-first century university. Visioning is oftentimes related to funding (Kotter, 2002) and the results of the relationship do not disprove this statement. Resource allocations are based on vision actualization and without a clear understanding of its requirements, allocation issues will indirectly cause distrust and confusion.

If visioning is the path for the institution, it must be coupled with the effect distance education has had on pedagogy. Findings substantiate relationships with the vision and the quality image of distance education courses, obtaining assistance to develop curriculum for distance education delivery, and providing avenues for faculty to develop new ideas using distance education.

According to Kotter (2002), communication and understanding of the vision mean more support coming from higher-level administration such as chairs, deans, and top-level administrators. In a bureaucratic structure, these are the people who have a great deal of influence on the faculty culture. As Wolcott (1997) stated, the most significant faculty culture is that of faculty rewards such as promotion and tenure. The system has been instilled in the higher education structure for decades and for the most part remains untouched regardless of the type of change. Findings support the relationships between concern about if a clear vision exists for distance education and support and encouragement from institutional administrators, deans, and chairs; or concern about resistance to change or concern about the expectation from higher-level administration that faculty engage in distance education as an add-on responsibility.
Goals and distance education

Sixteen statements were identified as meeting the minimum correlation criteria (.30) and are reported in Table 15. These statements where taken from the section of the survey that dealt with respondent concern about distance education and its effect on them. The correlation statement, “I am concerned about faculty, staff, and administration disagreeing over common goals associated with distance education,” reported a very strong relationship (.74) with the statement, “I am concerned about the institution’s ability to react to environmental changes needed in the organizational structure to delivery distance education.”

Goals, defined by Robbins (1990), are identified activities in which the organization achieves its mission and vision. Generally, goals are unattainable by individual efforts. However, Robbins pointed out that while it is not necessary for all members of the organization to endorse the organization’s goals in their entirety, it does imply general agreement with the mission. Therefore, group consensus and collaboration are important components of goal achievement. The implied relationship between disagreeing over common goals and concern regarding the lack of collaboration, comments made by colleagues, and support and encouragement from institutional administrators could make distance education efforts a challenge to obtain.

There is also a very strong relationship that is implied between the goals and the institution’s ability to react to environmental changes needed in the organizational structure. For the institution to be able to react to changes, the faculty, as a group, needs to be in concert with each other. If group disagreement exists, then making changes to the structure will be difficult. Resource allocations are directly affected by the goals of the institution. If
Table 15. Relationship between “I am concerned about faculty, staff, and administration disagreeing over common goals associated with distance education” and selected statement of concern

<table>
<thead>
<tr>
<th>Concern</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>The institution’s ability to react to environmental changes needed in the organizational structure to deliver distance education.</td>
<td>.74</td>
</tr>
<tr>
<td>My institution not committing enough resources for a quality distance education program.</td>
<td>.62</td>
</tr>
<tr>
<td>The support and encouragement from institutional administrators.</td>
<td>.61</td>
</tr>
<tr>
<td>Acquiring release time from existing duties to develop distance education courses.</td>
<td>.55</td>
</tr>
<tr>
<td>Availability of assistance to develop curriculum for distance education.</td>
<td>.55</td>
</tr>
<tr>
<td>Comments made by colleagues about distance education teaching experiences.</td>
<td>.55</td>
</tr>
<tr>
<td>The expectation by higher-level administration that faculty engage in distance education as an add-on responsibility.</td>
<td>.54</td>
</tr>
<tr>
<td>Resistance to change by administrators.</td>
<td>.54</td>
</tr>
<tr>
<td>Distance education efforts in my department becoming stagnated.</td>
<td>.53</td>
</tr>
<tr>
<td>The lack of collaboration among various disciplines and institutions in distance education.</td>
<td>.52</td>
</tr>
<tr>
<td>The availability of technical support.</td>
<td>.51</td>
</tr>
<tr>
<td>If DE will lead to diversified agricultural education program offerings.</td>
<td>.49</td>
</tr>
<tr>
<td>Slow implementation of distance education.</td>
<td>.49</td>
</tr>
<tr>
<td>My administrator’s idea of what it takes to have a quality distance education course.</td>
<td>.48</td>
</tr>
<tr>
<td>Monetary support for participation (i.e., stipend, overload).</td>
<td>.48</td>
</tr>
<tr>
<td>My overall job satisfaction.</td>
<td>.48</td>
</tr>
</tbody>
</table>
disagreement exists, allocation problems can occur resulting in internal conflict for the existing scarce resources.

According to Robbins (1990), group cohesiveness and agreement play a critical role in sustaining changes to the organization and its structure. This adoption, as findings show, is implied by the comments made by colleagues, collaborative efforts, and the ability to offer diverse educational programs and can have an impact on the organization’s ability to implement and sustain new programs. Slow implementation is more of an application than an affect on the group; however, if associated with a goal and not supported by the group, its chance of implementation is lessened. In addition, the goal may change during the time, thus setting back the initiative until another pressure is placed on the organization to change.

**Strategic plan and distance education**

Table 16 expresses that a substantial relationship exists between the correlation statement, “I am concerned whether distance education is addressed in my strategic plan” and “I am concerned about the support and encouragement from institutional administrators” (.63) or “I am concerned about support and encouragement from the dean or chair to teach at a distance” (.62).

Strategic planning is composed of all the means that an organization can use to redefine itself and to realize its plan (Robbins, 1990). The primary purpose of a strategic plan is to chart a course from where the organization is now to where it wants to be at an agreed point in the future. Therefore, it is important to know the areas in which faculty and administrators are concerned as primarily any change is first regarded by the employee as a change to his or her individual efforts and not the institution (Gilley & Maycunich, 2000).
Table 16. Relationship between “I am concerned about whether distance education is addressed in my strategic plan” and selected statement of concern

<table>
<thead>
<tr>
<th>I am concerned about…</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>The support and encouragement from institutional administrators.</td>
<td>.63</td>
</tr>
<tr>
<td>Support and encouragement from the dean or chair to teach at a distance.</td>
<td>.62</td>
</tr>
<tr>
<td>Resistance to change by administrators.</td>
<td>.59</td>
</tr>
<tr>
<td>The opportunity to develop new ideas using distance education.</td>
<td>.50</td>
</tr>
</tbody>
</table>

Berge (2003) stated the “overarching goal of strategic planning is to create a common vision of the desired future within the organization while ensuring that performance objectives are integrated into operations and strategies and that training provides those involved with the skills they need” (p. 609). He further states that “strategic planning is used to create and define the environment with its boundaries and parameters in which distance training and organizational learning will take place” (p. 610). He emphasizes the importance of communication, budgeting, infrastructure, workforce development, and revisions to policies and procedures in the linking of distance education to the strategic plan and programmatic efforts.

Findings from Table 16 imply a substantial relationship between distance education being addressed in the strategic plan and the humanistic aspects of the organization such as: support and encouragement from institutional administrators, support and encouragement from the dean or chair to teach at a distance, and resistance and the opportunity to develop new ideas using distance education. These findings support the literature claim that
communication of the plan and distance education place in the plan may determine the chart of its implementation.

3. **Identify the levels and factors relating to group consensus.**

**Lack of consensus and distance education**

Responses indicate a substantial relationship exists between the correlation statements, “I am concerned about a lack of consensus among faculty, staff, and administrators regarding distance education” or “I am concerned about the institution’s ability to react to environmental changes needed in the organizational structure to deliver distance education” (.65). Respondents also responded with a similar relationship (.63) between the correlation statement and “I am concerned about acquiring release time from existing duties to develop distance education courses” (.63). Robbins (1990) stated that group efforts are generally more sustainable than individual efforts; therefore, group consensus regarding distance education among faculty, staff, and administration is important for its survival.

Even though literature (Wolcott, 1997; Bates, 2000) states that many distance education efforts are often implemented at the departmental or even individual levels, it is still necessary to achieve group consensus for the adoption of distance education. Regardless of the level, adoption will affect the organizational structure, cultures, and change process. To support Wolcott and Bates, Robbins (1990) stated that even individual efforts can bring about consensus, especially if implemented in the planned change model, as successful replications of the activity will allow the group to see its success and adopt it as a norm or value.

Findings from Table 17 support the literature as a number of the statements can be labeled as a group force. However, one statement, slow implementation of distance
Table 17. Relationship between “I am concerned about a lack of consensus among faculty, staff and administrators regarding distance education” and selected statement of concern

<table>
<thead>
<tr>
<th>I am concerned about…</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>The institution’s ability to react to environmental changes needed in the organizational structure to deliver distance education.</td>
<td>.65</td>
</tr>
<tr>
<td>Acquiring release time from existing duties to develop distance education courses.</td>
<td>.63</td>
</tr>
<tr>
<td>Slow implementation of distance education.</td>
<td>.61</td>
</tr>
<tr>
<td>How my colleagues outside the department will view distance education efforts.</td>
<td>.58</td>
</tr>
<tr>
<td>The expectation by higher level administration that faculty engage in distance education as an add-on responsibility.</td>
<td>.57</td>
</tr>
<tr>
<td>My institution not committing enough resources for a quality distance education program.</td>
<td>.57</td>
</tr>
<tr>
<td>The support and encouragement from institutional administration.</td>
<td>.56</td>
</tr>
<tr>
<td>My personal knowledge of distance education.</td>
<td>.55</td>
</tr>
<tr>
<td>Monetary support for participation (i.e. stipend, overload).</td>
<td>.52</td>
</tr>
<tr>
<td>The faculty workload associated with distance education.</td>
<td>.52</td>
</tr>
<tr>
<td>Comments made by colleagues about distance education teaching experiences.</td>
<td>.52</td>
</tr>
<tr>
<td>My administrator’s idea of what it takes to have a quality distance education course.</td>
<td>.51</td>
</tr>
<tr>
<td>An opportunity for career advancement based on distance education instruction.</td>
<td>.50</td>
</tr>
<tr>
<td>Distance education efforts in my department becoming stagnant.</td>
<td>.48</td>
</tr>
<tr>
<td>Resistance to change by administrators.</td>
<td>.48</td>
</tr>
<tr>
<td>The effect of distance education on my promotion and tenure efforts.</td>
<td>.46</td>
</tr>
<tr>
<td>The quality image of distance education courses as perceived by students.</td>
<td>.44</td>
</tr>
</tbody>
</table>
education, can be seen as a deterrent to achieving a group force effect as individuals may disfavor distance education if implementation is slow. Consensus can be enhanced by good communication (Robbins, 1990). Open lines of communication alleviate concerns of those members who may have doubts about an initiative. This may be more apparent in today’s rapidly changing environment in which distance education thrives.

Consensus is impacted by lack of rewards and internal and external exposure (Kotter, 2002). In general, people are first interested in how the change will affect them and also what type of benefit they are able to derive in order to adopt the change (Gilley & Maycunich, 2000). Consensus can be in two forms: complete consensus that leads to a strong group force and ultimately widespread adoption or individual efforts in which the employees are more concerned about how the change will affect them. In the latter situation, the employees may not internally support the change at first; however, through incentives such as release time, career advancement, promotion and tenure efforts and resource allocations they can be persuaded to accept the changes for the sake of the group (Gilley & Maycunich, 2000).

4. **Identify key organizational structure factors that could affect participation in distance education.**

A review of literature reports the need to better understand the organization of distance education (Berge, 2003; Hanna, 2003; Bates, 2000; Hanna, 2000a, Murphy & Terry, 1998a; Wolcott, 1997). The purpose of this objective is to identify those organizational structure factors that may have an impact on the change process as a result of introduction of distance education initiatives.
To identify the key factors, the individual response Likert-based variables were combined into two separate groups: disagree and agree. Responses of “definitely disagree” and “disagree” were combined into the recoded variable of disagree. Likewise, responses of “definitely agree” and “agree” were combined into a recoded variable of agree. Statements having a recoded variable of two-thirds or greater were identified as being key factors. To analyze the data, the researcher relied on frequencies and percentages. A comprehensive listing of the individual responses can be found in Appendix Table E-1.

Table 18 identifies that of the 22 statements addressing organizational structure, 13 (59%) statements were found to have a percentage of 66.6% or greater in either category of disagree or agree. Findings show that respondents expressed disagreement with 4 out of the 13 statements. Those statements and corresponding frequencies are as follows:

- “Distance education is a political agenda item in my department.” (134 / 172 responses)
- “In my department, faculty, staff, and administration are primarily concerned with departmental survival rather than programmatic survival.” (130 / 173 responses)
- “Distance education is an anomaly in my department.” (122 / 171 responses)
- “Administrators make decisions without faculty input on most distance education initiatives.” (118 / 174 responses)

Nine out of the remaining 13 statements expressed agreement and had combined responses of 66.6% or greater. Within those 9 statements, 4 statements had percentages of 85% or greater.

- “The traditional land-grant mission of teaching, research, and extension can be enhanced through distance education.” (163 / 174 responses)
Table 18. Identification of key factor statements by respondents

<table>
<thead>
<tr>
<th>Statement</th>
<th>N</th>
<th>Disagree&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Agree&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance education is a political agenda item in my department.</td>
<td>17</td>
<td>134 (77.9)</td>
<td></td>
</tr>
<tr>
<td>In my department, faculty, staff and administration are primarily concerned with departmental survival rather than programmatic survival.</td>
<td>17</td>
<td>130 (76.2)</td>
<td></td>
</tr>
<tr>
<td>Distance education is an anomaly in my department.</td>
<td>17</td>
<td>122 (71.4)</td>
<td></td>
</tr>
<tr>
<td>Administrators make decisions without faculty input on most distance education initiatives.</td>
<td>17</td>
<td>118 (67.8)</td>
<td></td>
</tr>
<tr>
<td>The traditional land-grant mission of teaching, research and extension can be enhanced through distance education.</td>
<td>17</td>
<td>163 (93.7)</td>
<td></td>
</tr>
<tr>
<td>Distance education can stimulate a change in educational strategies within the AgEd profession.</td>
<td>17</td>
<td>163 (93.2)</td>
<td></td>
</tr>
<tr>
<td>Higher education must change how they do business to meet the needs of the lifelong learner.</td>
<td>17</td>
<td>161 (92.6)</td>
<td></td>
</tr>
<tr>
<td>Faculty are the most valuable resource in my department’s distance education efforts.</td>
<td>17</td>
<td>157 (89.8)</td>
<td></td>
</tr>
<tr>
<td>Distance education efforts are compatible with the norms and values of my department.</td>
<td>17</td>
<td>142 (82.1)</td>
<td></td>
</tr>
<tr>
<td>My department believes distance education is able to address the societal needs of lifelong learning.</td>
<td>17</td>
<td>132 (77.2)</td>
<td></td>
</tr>
<tr>
<td>My department has accepted distance education as a part of our agricultural education culture.</td>
<td>17</td>
<td>127 (73.4)</td>
<td></td>
</tr>
<tr>
<td>My department has increased its efforts in strengthening distance education initiatives each year.</td>
<td>17</td>
<td>128 (73.2)</td>
<td></td>
</tr>
<tr>
<td>In order for distance education to continue growing at my campus, it will need to become institutionalized.</td>
<td>17</td>
<td>118 (68.2)</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>= Definitely disagree and Disagree.
<sup>b</sup>= Agree and Definitely agree.
• "Distance education can stimulate a change in educational strategies within the AgEd profession." (163 / 175 responses)

• "Higher education must change how they do business to meet the needs of the lifelong learner." (161 / 174 responses)

• "Faculty are the most valuable resource in my department’s distance education efforts." (157 / 175 responses)

Agricultural education has a strong history of commitment to the mission of educational outreach, or engagement, since its inception (Stefferud, 1962). Stefferud (1962) stated the following and there is no reason to believe that it does not apply today: “An outstanding accomplishment of the land-grant colleges is the development of ways to carry new knowledge in agriculture to the people who can use it best” (p. 16). The Kellogg Report (1999) supports the statement by reporting that the land-grant institutions and the public non-land-grant institutions are still committed to outreach or engagement but that the context to which it is applied has changed dramatically.

Findings from this study are congruent with those theorized by Wolcott (2003, 1997). They demonstrate that respondents recognize the place distance education has in furthering the engagement effort through enhancement of the traditional land-grant mission and suggest that the profession may move toward engagement by recognizing that higher education must change how it does business to meet the needs of the lifelong learner. In addition, findings also show that respondents feel that distance education can stimulate a change in educational strategies. This is congruent with previous agricultural education studies that find the profession has integrated new pedagogical methods as a means of addressing the learning needs of its clientele (Murphy & Terry, 1998a).
Findings from this section show four out of the nine (44.4%) agreement statements together with one disagreement statement indicate distance education has been accepted by the agricultural education profession as a whole, even at the department level. In addition, findings indicate distance education is not an anomaly at the department level and has been accepted as part of the agricultural education culture. This is critical as culture is what the organization is and what it believes and values (Tierney & Rhoades, 1994). It is also the foundation from which new initiatives begin or are strengthened. This is evident by the finding that respondents felt the department had strengthened its distance education offerings during the past year.

Almost seven out of ten respondents (68.2%) indicated that they believed that for distance education to continue growing at their campus, it would need to become institutionalized. The process of institutionalization, or organizational change, cannot occur unless there is unrest from within the existing human resource framework, which can only occur as individuals find or see better ways of doing things that are not easily done within the existing structure (Stitchcombe, 1965). Findings support the desire for change as there is sufficient faculty unrest or lack of support. Robbins (1990) asserts that political forces are some of the catalysts of organizational change. Findings report that distance education is not a political agenda item, and conversely, departments are increasing their efforts in strengthening distance education initiatives. This stabilization does not lend itself to organizational change, such as what institutionalization will require to be successfully completed, at least from the perspective of the agricultural education profession.

While American higher education has been classified as decentralized (Hanna, 2000b), there is an essence of bureaucratic structure, which allows for streamlined decision-making
of the institution (Robbins, 1990). In regards to distance education initiatives, respondents expressed that they disagreed that administrators make decisions without faculty input. The decentralized nature of higher education is dichotomous in regard to the increasing need for centralization in distance education. However, respondents feel that administrators do not make decisions without faculty input in distance education initiatives; therefore, the opportunity for faculty input into the decision-making process is still available. This is critical: faculties are the governing bodies of the institution and without their support, change, regardless of type, is difficult.

5. Identify key levels of respondent concerns that could affect participation in distance education.

Previous studies conducted by Wolcott (2003) and Betts and Wolcott (1999) identify challenges and barriers. They talk about them in the micro sense of intrinsic and extrinsic factors; however, recent organizational behaviorist such as Senge (2000) and Kotter (2002) have emphasized the need to look within the employees to ascertain their feelings toward change. The purpose of this objective is to identify key factors that may or may not affect the respondent willingness to participate in distance education initiatives.

To identify the key factors, the individual response Likert-based variables were combined into two separate groups: disagree and agree. Responses of "strongly disagree" and "disagree" were combined into the recoded variable of disagree. Likewise, responses of "strongly agree" and "agree" were combined into a recoded variable of agree. Statements, having a recoded variable of two-thirds or greater were identified as being key factors. To analyze the data, the researcher relied on frequencies and percentages.
Table 19 shows respondents did not express concern about the "ability to achieve professional prestige and status" (129/176) "resistance to change by administrators," (126/173) and "having my job description include teaching at a distance" (125/175).

Table 19. Identification of key concern statements by respondents

<table>
<thead>
<tr>
<th>I am concerned about…</th>
<th>N</th>
<th>Disagree&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Agree&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to achieve professional prestige and status.</td>
<td>176</td>
<td>129 (73.3)</td>
<td></td>
</tr>
<tr>
<td>Resistance to change by administrators.</td>
<td>173</td>
<td>126 (72.8)</td>
<td></td>
</tr>
<tr>
<td>Having my job description include teaching at a distance.</td>
<td>175</td>
<td>125 (71.4)</td>
<td></td>
</tr>
<tr>
<td>The opportunity to conduct research in distance education.</td>
<td>175</td>
<td>124 (70.9)</td>
<td></td>
</tr>
<tr>
<td>The opportunity for position visibility at other institutions.</td>
<td>174</td>
<td>123 (70.7)</td>
<td></td>
</tr>
<tr>
<td>How my colleagues outside the department will view distance education efforts.</td>
<td>175</td>
<td>123 (70.3)</td>
<td></td>
</tr>
<tr>
<td>Keeping current with distance education technology.</td>
<td>171</td>
<td></td>
<td>135 (78.9)</td>
</tr>
<tr>
<td>The faculty workload associated with distance education.</td>
<td>176</td>
<td></td>
<td>134 (76.1)</td>
</tr>
<tr>
<td>The quality image of distance education courses as perceived by students.</td>
<td>174</td>
<td></td>
<td>122 (70.1)</td>
</tr>
<tr>
<td>Acquiring release time from existing duties to develop distance education courses.</td>
<td>176</td>
<td></td>
<td>122 (69.3)</td>
</tr>
<tr>
<td>My ability to assist students to learn better using distance education.</td>
<td>175</td>
<td></td>
<td>119 (68.0)</td>
</tr>
<tr>
<td>Availability of assistance to develop curriculum for distance education.</td>
<td>174</td>
<td></td>
<td>117 (67.2)</td>
</tr>
<tr>
<td>Monetary support for participation.</td>
<td>176</td>
<td></td>
<td>118 (67.0)</td>
</tr>
</tbody>
</table>

<sup>a</sup> = Strongly disagree and Disagree.  
<sup>b</sup> = Agree and Strongly agree.
Conversely, seven statements had responses of agreement, with percentages of 66.7% or greater. One hundred thirty-five (78.9) out of 171 respondents expressed that they were concerned about "keeping current with distance education technology."

Studies were conducted by Berge (2001), Betts and Wolcott (1999), and Wolcott (1997) on the foundation for analyzing the barriers and challenges and, on a microlevel, the incentives and motivations related to distance education participation. Kotter (2002) encouraged further studies to look at the feelings when talking about change. The reason for this is, as pointed out by Gilley and Maycunich (2000), that employees are ultimately concerned about what is going to happen to them personally and how it is going to affect them. Therefore, Kotter (2002) insinuated that feelings are the point of where the factors affecting change should be rooted and not at the other levels.

Ultimately, participants in any change are concerned about what is the impact on them but also their feelings. The emotional component of any human is fragile and with the proper cultivation can be strengthened as illustrated in Maslow's hierarchy of needs. As feelings are replaced with needs and desires, the ability to achieve self-efficacy is more probable.

Findings from this table indicate that respondents are not concerned about the external appearance of participating in distance education. Internal to the organization, respondents are not concerned about achieving professional prestige and status or how their colleagues outside the department will view distance education efforts. They are also not concerned about having their job description include teaching at a distance. These findings differ somewhat from Wolcott (1997) as her study revealed that external appearances and having job descriptions include teaching at a distance were a disincentive to participating in distance education.
Respondents were concerned about the workload-related issues, keeping current with distance education technology, availability of assistance, and their ability to assist students to learn better. These findings are congruent with the findings of Berge (2001) and Wolcott (1997).
CHAPTER V. CONCLUSIONS AND RECOMMENDATIONS

This chapter will provide a summary of the study, make conclusions based on the findings, and will offer recommendations for further research. The chapter contains the following sections: 1) Purpose, 2) Objectives, 3) Methods, 3) Conclusions, and 4) Recommendations.

Purpose

The primary purpose of this study was to determine the perceptions of agricultural educators toward the inclusion of distance education into higher education. The secondary purpose was to identify and examine factors affecting the organizational structure, faculty concerns, and the inclusion of distance education in the mission, vision, goals, and the change process.

Objectives

The specific objectives of the study were as follows:

1) Establish a profile of listed respondents in the 2002–2003 American Association of Agricultural Educators (AAAE) Directory of University Faculty in Agricultural Education.

2) Examine the relationship of the mission, vision, and goal statements with statements of organizational structure and concern.

3) Identify the levels and factors relating to group consensus of distance education adoption.
4) Identify key organizational structure factors that could affect faculty participation in distance education.

5) Identify key levels of faculty concern that could affect their participation in distance education.

Methods

A descriptive survey was developed and administered to individuals listed in the 2002–2003 American Association of Agricultural Educators (AAAE) Directory of University Faculty in Agricultural Education. A census was used so that the entire population of persons involved in the agricultural education profession could participate in the study.

The literature provided guidance to an area of distance education that has been identified by researchers for further research. The instrument was developed using statements taken from previous studies conducted by Dr. Kristin Betts and Dr. Zane Berge and were selected as to their relevancy to organizational structure and faculty concern. The instrument used in this survey was modified to analyze the opinions of the respondents instead of identifying the barriers, motivations, or disincentives for participating in distance education efforts.

The data collected from the respondents were coded, entered, and analyzed using the Statistical Product and Service Solutions formally known as the Statistical Package for the Social Sciences, SPSS. The statistical procedures used included frequencies, means, standard deviations, correlations, and rankings.
Conclusions

This study has produced seven conclusions drawn from the findings of the survey. Implications can be drawn from this study and applied to change efforts and respondent perceptions of distance education within the profession of agricultural education. The findings of this study demonstrate the interrelatedness of the components of change as distance education initiatives are introduced into the organizational structure. The findings also were used to identify those areas of concern that respondents feel or do not feel would affect their participation in distance education efforts.

Conclusion 1: Individuals in the respondent profile have a desire to be involved in distance education, are technology-savvy, and are early-career professionals.

The following findings show that:

- Four out of ten (38.6%) of respondents identified themselves as holding the rank of assistant professor.
- Nearly three out of ten (28.3%) of self-identified assistant professors received their doctorate after 1991.
- Out of 146 respondents, 69.1% indicated that they have a teaching appointment greater than 51%.
- Slightly more than seven out of ten (72.9%) of the 70 respondents who have an Extension appointment reported their appointment percentage as less than 50%.
- Almost one-fifth (17.6%) of the respondents reported holding the position of department chair.
- Most respondents had been in a teaching position for less than 10 years.
• An equal percentage of respondents had and had not taught a distance education course.

• Nearly all (97.6%) of the respondents (n=176) use technology in their face-to-face courses.

• The WWW/Internet was the most frequently used technology. Cassette technology was the least used.

• Slightly more than six out of ten (60.8%) of the 176 respondents had a course website.

• A slight majority (54.2%) of the 166 respondents indicated they were willing to teach at a distance but needed to think through their actions.

• Over one quarter (26.3%) of the 62 respondents who had not taught a distance education course intend to adopt distance education within the next two years.

Conclusion 2: Distance education has been accepted as part of the agricultural education culture; however, the implementation of distance education and organizational changes maybe impeded because of respondent concerns regarding distance education and its interaction with a shared vision, the overall mission of the institution, and a lack of consensus among faculty, staff, and administrators.

Findings from this study show that:

• A slight majority of respondents (58.0%) of 176 respondents were concerned whether a shared vision exists for distance education at the college level.

• Over one-half (52.9%) of the 174 responses wondered if a clear understanding exists about distance education in the overall mission of the institution.
• More than one-half (57.4%) of the 176 respondents were concerned about the lack of consensus among faculty, staff, and administrators regarding distance education. The lack of consensus is demonstrated through the following statements.
  • 61% of 174 respondents were not concerned about comments made by colleagues about distance education teaching experiences.
  • 59.5% of 173 respondents were not concerned about faculty, staff, and administration disagreeing over common goals associated with distance education.
  • 50.3% of 174 respondents expressed concern about the slow implementation of distance education.

The literature tends to support this conclusion. Robbins (1990) stated that the most powerful force leading to sustainable change is the consensus of all the individuals involved in the change. He elaborated by stating that while it is not necessary for the group to agree all the time, it is imperative that the group agree on what is necessary for change to be sustainable and then adopted as part of the culture.

The mission, vision, and goals are the driving force of an organization. While this tripartite is integral in the decision-making process, it also plays a significant role in cultural adoption and acceptance of the initiative as a norm or value. However, if a lack of consensus exists, then adoption may be slowed to the point where it is stagnated at the level of underlying assumptions and never become a reality of the culture. Kotter (2002) stated that if an employee is provided a clear description of the mission, vision, and goals and is able to cognitively access their meaning and impact then change occurs within or to the organization.
and will be sustainable. He also implies that a lack of clarity is oftentimes a direct result of communication failure. This process will ultimately result in employee buy-in and acceptance of the initiative as the way things are done.

Consideration for organizational culture and its relationship with the mission, vision, and goals in the adoption of distance education is an integral part of successful organizational change. The renewed emphasis on the mission, vision, and goals of the institution as well as the public outcry for higher education to become more accountable have made the tripartite a major focus as higher education moves into the postindustrial era. Findings from this study suggest that respondents believe that distance education has been accepted as part of the culture; however, what is not apparent to respondents is the role of distance education in the mission, vision, and goals.

**Conclusion 3: Overwhelming support to nurture widespread adoption of distance education among faculty may be slowed by indefinite opinions regarding support and encouragement from administrators.**

Findings indicate a substantial relationship is implied between “I am concerned about whether distance education is addressed in my strategic plan” and

- “I am concerned about the support and encouragement from institutional administrators.” (.63)
- “I am concerned about the support and encouragement from the dean or chair to teach at a distance.” (.62)
- “I am concerned about resistance to change by administrators.” (.59)
• "I am concerned about the opportunity to develop new ideas using distance education." (.50)

Rogers (1995) identifies good communication as one of the most significant strategies for a successful change. Robbins (1990) stated earlier that it is imperative that the change agents have a good working relationship and are able to communicate support and encouragement for the change to the people directly affected by it.

Robbins (1990) identified change agents as individuals who are typically top-level administrators or persons with advanced degrees and who have knowledge or experience in the change area. In the case of higher education, a professional bureaucracy, change agents are frequently top-level administrators, and it is hoped that some degree of empathy for the faculty who must implement the change exists.

Findings from this study suggest that respondents are indefinite about receiving support and encouragement from institutional administrators and deans or chairs. This expression by faculty supports the findings by Husmann and Miller (2001), which state that administrators may be confused about their role in making distance education effective and look at their role as administrative and thus not one of offering support and encouragement.

The strategic plan, while not identified as a factor in respondent willingness to teach at a distance, does imply a relationship between receiving support and encouragement from the change agents of the institution. The strategic plan is the game plan that is used by higher level administration in planning and implementing the activities of the institution. However, findings also imply a relationship between resistance to change by administrators and the strategic plan. The professional bureaucratic structure creates the top-down effect in regard to
decision-making; therefore, respondents see the administrators not as facilitators of change but their superiors who control career advancement, salary increases, and other faculty rewards. In addition, literature states that there is little desire for administrators to change the way things are done since the end effect would be to change the status quo, thus disrupting the system that put them in power.

Conclusion 4: Distance education is viewed as one of the means to enhance the traditional land-grant mission of teaching, research, and extension.

The findings suggest that “the traditional land-grant mission of teaching, research, and extension can be enhanced through distance education” and the following:

- “Distance education can stimulate a change in educational strategies in the agricultural education profession.” (.64)
- “Higher education must change how they do business to meet the needs of the lifelong learner.” (.63)
- My department believes distance education is able to address the societal needs of lifelong learning.” (.54)

Findings also show at least 90% of agreement of respondents agree with the following three statements:

- “The traditional land-grant mission of teaching, research, and extension can be enhanced through distance education.” (93.7%)
- “Distance education can stimulate a change in educational strategies within the agricultural education profession.” (93.2%)
• “Higher education must change how it does business to meet the needs of the lifelong learner.” (92.6%)

How can distance education enhance the traditional land-grant mission of teaching, research, and extension? First, respondents perceive distance education as a stimulus for a change in educational strategies. Second, the opportunity to conduct research in the field of distance education continues to expand. This is in part due to faculty and researchers becoming aware that distance education is different from the traditional instruction in that it is multifaceted and utilizes theories and concepts from a variety of disciplines. This statement is supported through the literature review that reveals application of theories and concepts from the disciplines of business, sociology, anthropology, and education.

Finally, Wolcott (1997) has established that distance education is one means by which the traditional land-grant mission is addressed. The findings strongly support Wolcott’s statement; that these data reveal that respondents believe that the land-grant mission is enhanced through distance education. This is further substantiated by findings that show that respondents believe that their department is able to address societal needs through distance education.

The traditional land-grant mission has driven higher-education initiatives for over a century. Originally created as a means to educate the masses of American people unable to gain admission to the elitist colleges, the land-grant institutions have become a model for all public higher education through its emphasis on teaching, research, and extension (outreach or service). The Kellogg Report (1999) reemphasized the meaning of the mission by encouraging all public higher-education institutions to reengage the learner and to address
society's need for education. To accomplish reengagement, the report emphasized that higher education needs to change how it does business to meet the needs of the lifelong learner. Dooley and Murphrey (1998) asserted that in order for higher education to change, it must acknowledge the opportunities to conduct research, develop, and implement new educational strategies with each technological innovation.

Distance education is described as a means for reaching new audiences (Wolcott, 1997) and a precept for changing educational strategies (Hanna, 2000c; Bates, 2000; Murphy & Terry, 1998a; Wolcott, 1997). The technological revolution has provided higher education a plethora of teaching and learning tools. For the most part, higher education has adopted these tools in face-to-face and off-campus courses but the rate of distance education adoption throughout the faculty ranks and subsequently the institution has been slower than society would prefer. Some authors believe that private industry is much more advanced in its implementation of emerging technologies. This is most likely due to its ability to rapidly respond to environmental pressure and a more lucrative financial resource pool. Society sees these advances and subsequently demands that higher education implements these same technologies in educational opportunities; however, the structure is ill equipped to handle the change.

**Conclusion 5:** Respondents were more concerned about the impact of distance education on the technology, pedagogy, and workload, than the impact on their career paths.

Findings from this study show that the respondents were more concerned about the effect of distance education initiatives in the areas of technology, pedagogy, workload, and
rewards. This is consistent with findings from Berge (2001), Wolcott (2003, 1997), and Betts (1998).

Technology

- "I am concerned about keeping current with distance education technology."

(78.9% of 171 responses)

Pedagogy

- "I am concerned about the quality image of distance education courses as perceived by students." (70.1% of 174 responses)

- "I am concerned about my ability to assist student to learn better using distance education." (69.3% of 176 responses)

- "I am concerned about availability of assistance to develop curriculum for distance education." (67.2% of 174 responses)

Workload

- "I am concerned about the faculty workload associated with distance education."

(76.1% of 176 responses)

- "I am concerned about acquiring release time from existing duties to develop distance education courses." (68.0% of 175 responses)

Findings are dichotomous to those found in literature related to career advancement. Minimal concern about the effect of distance education on promotion and tenure and career advancement were reported by respondents.

The majority of respondents were not overly concerned about:

- "Having my job description include teaching at a distance." (71.4%)
• “Ability to achieve professional prestige and status.” (73.3%)
• “How my department will consider distance education efforts in my review.” (57.8%)
• “An opportunity for career advancement based on distance education instruction.” (62.0%)
• “The effect of distance education on my promotion and tenure efforts.” (62.9%)
• “How my involvement in distance education will affect my salary increases.” (59.2%)
• “The effect on my tenure, promotion, recognition and salary.” (58.6%)

The traditional cultural norms are the mainstay of faculty and have defined the role of faculty for decades (Olcott & Schmidt, 2000). Findings from this study do not support the findings of Wolcott (1997). She stated that the most noted cultural component is the faculty reward system. Rogers (1995) stated that in order for faculty to support distance education, it must be congruent to the beliefs and values already held about university education. However, findings from this study show that there is a lack of consensus about the mission, vision, and goals; therefore, one can only suspect that distance education is not congruent to them.

Tierney (1998) stated that culture is the guide to faculty behavior; therefore, it is a major component in determining the faculty’s career path. Findings show that distance education has been accepted as part of the faculty culture and is a component in the norms and values of the department; however, it is most likely that this acceptance has occurred through repetition. Perhaps respondents believe that distance education efforts have a minimal effect on their promotion and tenure efforts, but it appears that they forget the criteria for advancement is based on the mission, vision, and goals of the institution.
Conclusion 6: The organization’s ability to change its structure of distance education initiatives, is dependent on the impact of distance education relative to the interpretation of the mission, vision, and goals of the university.

Findings from this study imply that substantial to very strong relationships exist between the ability of the organization to react to environmental changes and the following statements:

- “I am concerned about faculty, staff, and administration disagreeing over common goals associated with distance education.” (.74)
- “I am concerned about a lack of consensus among faculty, staff, and administrators regarding distance education.” (.65)
- “I am concerned about if a clear understanding exists about distance education in the overall mission of the institution.” (.65)
- “I am concerned about whether a shared vision exists for distance education.” (.58)

Environmental pressures can originate from technological, societal, political, and economic sources. At any given time, each of these factors or a combination thereof can provide the impetus for change in the organization. While higher education is repeatedly confronted with these pressures, distance education initiatives have brought the need for the inclusion of distance education in the mission, vision, and goal to the forefront. This inclusion provides a means for logical and rational reaction or planning to the changes. However, the ability of the organization to react and to introduce changes into the organization is dependent upon a clear understanding by all the members of the initiative’s place and function in the organization.
Each one of these statements frames distance education differently; however, each contributes to the same effort: to assure that the organization has the structure needed to react to change. Most notable is the implied relationship to the lack of consensus about distance education. Communication within an organization is critical for a variety of reasons but especially when introducing change. When communication channels are weak, as findings from this study suggest, there is an air of confusion and unrest toward initiatives. As recently as 2001, Dooley and Murphrey identified one of the weaknesses to distance education adoption as weak communication channels between faculty and administrators.

Bothel (2001) stated that many distance education program are implemented when the vision is not universally shared and where the goals are not clearly stated and understood. Goals assist in making the organization accountable by providing clear steps for the initiative; however, if there is disagreement regarding the goals and steps, the ability to change will be hampered. Husmann and Miller (2001) stated that it is critical for the mission of the organization to be meaningful so that the administration supports its efforts and uses it to direct the organization in decision-making.

Conclusion 7: Distance education is widely accepted as a component in many agricultural education programs and is compatible with the norms and values of agriculture education departments.

Findings from this study assert that:

- 71.3% disagree that distance education is an anomaly in my department.
- 82.1% agree that distance education efforts are compatible with the norms and values of my department.
76.5% disagree that distance education is held in the same regard as the way things have always been done around here.

Distance education is becoming a part of the way things are done in higher education; however, this process has been a tedious one to say the least. Distance education, through its technologies, changes so rapidly that already higher education does not have an opportunity to create a means of its adoption; the technology has become obsolete. Therefore, the ability of the organization to create a means for adoption is forgotten as interest is diverted to the even newer technology and the cycle repeats itself. This situation may continue to prevail until faculty and staff are able to find alternative uses for minimally used technologies; however, the rate of usage may vary from the original implementation point.

Distance education has for the most part always been a component of agricultural education departments through its commitment to outreach and service. This commitment has been in existence for over a century; therefore, agricultural education has had a significant time period in which to accept distance education as part of the culture. However, Murphy and Terry (1998a) state that more needs to be done.

Findings also imply that a relationship exists between “The traditional land-grant mission of teaching, research, and extension can be enhanced through distance education” and “Distance education efforts are compatible with the norms and values of my department” (.52). The land-grant mission is one of the driving forces behind the existence of agricultural education departments; otherwise stated distance education is the conduit between the traditional land-grant mission and the acceptance in the norms and values and should be used by change agents as strategies are developed.
As higher education continues to move toward a postindustrial philosophy, the importance of the way things are done will become slowly obsolete. Things change rapidly in a postindustrial world. The predictable current structure of higher education does not lend itself particularly well to flexibility; however, with the reallocation of responsibilities to the lower-level units, standardization efforts will not doubt become an event of the past.

**Recommendations**

Distance education has been in existence since the mid-1800s; however, it has never realized widespread adoption among faculty ranks or at the institutional level. A possible explanation for the lack of adoption is that the technologies associated with distance education have caused minimal to moderate change to the traditional cultural norms; thus, the status quo has remained in equilibrium. However, distance education through the facilitation of computer and communication technologies, has affected nearly every aspect of higher education. Internally, these changes are not particularly apparent to the public eye as the rate of change is much slower than our society is accustomed to and expects. The fact remains the generation of computer and communication technologies has left nothing in higher education’s system untouched, unlike its technology forerunners.

The postindustrial era has provided a unique opportunity for higher education to truly reallocate the responsibility of management and program development to smaller units of the college and department. Is it possible that this structural environment will allow distance education to flourish and realize widespread adoption? The answer to this question lies in the ability of the institution to create a culture that embraces and sustains the needed changes. In addition, the postindustrial era has emphasized the importance of the mission, vision, and
goals in directing the organization’s activities. Recently in higher education the mission, vision, and goals have played a more important part in how business is conducted as public demands have required greater accountability and more stringent attention to the tripartite.

Findings from Chapter IV and the literature review comprise the foundation for the recommendations of this study.

Recommendation 1: Distance education can contribute to changing the way higher education does business to meet the needs of the lifelong learner.

Findings show that respondents agreed or strongly agreed with the following:

- Distance education can address the societal needs of the lifelong learner. (77.2% of 171 respondents)
- Higher education must change how they do business to meet the needs of the lifelong learner. (92.6% of 174 respondents)
- Slightly more than six out of ten (63.4%) of the respondents disagreed or definitely disagreed that their departments are more reactive than proactive in the distance education arena.

Relevant written comments from respondents are presented for anecdotal support.

Our institution needs to commit to the concept of using distance education to engage the university with learners statewide, nationwide, and internationally. (tenured associate professor/department head)
I see major changes in the structure of higher education in the U.S. and distance education will be the catalyst. Universities and faculty can no longer sit back and rely on students coming to them. Universities will become much more proactive in marketing courses and degree programs. They will take a more business-like approach to “selling” their product. (tenured assistant professor)

Robbins (1990) stated historically that higher education has been a complacent institution relying on a stable environment, division of labor, mass production and a top-down hierarchical structure. However, Morgan (1997) pointed out that the traditional industrial model is now being forced to focus on small and flexible units to carry out the roles and responsibilities of the institution. This must continue for higher education to address the recommendations of the Kellogg Report (1999) but more importantly for distance education to continue growing. Distance education has been identified as a means for higher education to change the way it has been meeting the needs of the lifelong learner (Wolcott, 1997). To that end, higher education is responding by becoming a product and service-driven business that is faced with similar or greater scrutiny and accountability than private business. For higher education, this has come with greater expectations and demands from the public. Legislators and the public are constantly reminding higher education that they need to respond to change faster and still maintain course quality at a reasonable cost.

The public perceives distance education as an economical means of achieving an education. Many higher education administrators see the same potential; however, most administrators are largely unaware of distance education, do not desire to learn the technologies or its verbage, access the “actual” costs or contemplate the issues that may or
may not be associated with it. Their overriding concern is meeting the needs of the lifelong learner by whatever means possible. One of the fallacies of the postindustrial age is that the people who ultimately make the final institution wide decisions are those least involved in the process. Therefore, it is critical that the mission, vision, and goals include distance education so that decision-makers will focus on it and allow for further adoption.

If higher education is to continue to meet the needs of the lifelong learner, it will need to focus on the learner and their needs. Higher education may be able to meet the learners needs, but can the changes, internal and external, be self-sustaining?

Recommendation 2: Communicating and understanding the role of distance education in the organizational mission, vision, goals, and strategic plan of the higher education should be strengthened.

The findings are as follows:

- Over nine-tenths (91.5%) of respondents indicated that higher education must change how it does business to meet the needs of the lifelong learner.
- A majority of respondents (67.0%) believe that “in order for distance education to continue growing at my campus, it will need to become institutionalized.”
- Slightly over one-half (58.0%) of respondents expressed they wondered whether a shared vision exists for distance education at the college level.
- Fifty-two percent of respondents questioned “if a clear understanding exists about distance education in the overall mission of the institution.”
• Less than four-tenths (39.8%) of respondents indicated they were concerned about "faculty, staff, and administration disagreeing over common goals associated with distance education."

• Slightly over one-half (56.3%) of respondents were concerned about "the expectation by higher level administration that faculty engage in distance education as an add-on responsibility."

In theory, the mission, vision and goals of a university or college are the foundation in which the organization and organizational culture are developed and which emulate the traditional underpinning of land-grant mission of teaching, research, and extension. The mission, values, and goals also serve as the means for determining the criteria for promotion and tenure, resource allocations; they also provide direction for the institution as it continues to grow and embarks on new initiatives. Jones, Lindner, Murphy, and Dooley (2002) stated that any change in regards to the scholarship of teaching and research will generally affect the institutional culture and ultimately the mission, vision, and goals of the institution. Bates (2000) stated that the institution's commitment should be articulated in the institutional goals, communicated through stated priorities, and demonstrated by actions of top-level administration; it should also be understood by the department and the individual faculty member. Prestera and Moller (2001) also asserted that without a clear understanding and alignment of the mission, vision, goals, and priorities of the faculty, institutionalization is almost impossible. In addition, as the acceptance of distance education becomes increasingly widespread, faculty may encounter difficulties in addressing the requirements for promotion
and tenure and recognition through the institution and profession because of a lack of clear understanding of the mission, vision, and goals surrounding its initiatives.

Communication strategies have been identified as the most powerful force in organizational change and for the acceptance of personal change. Rogers (1995) stated that adoption of a new idea occurs is a direct result of interpersonal networks and that communication networks are the mechanism in which adoption is moved through the s-curve of diffusion. He further stated that the area of the diffusion curve between 10% and 20–25% adoption is the heart of the diffusion process. He elaborated by saying that after the 25% mark, it is impossible to stop the further diffusion of a new idea, even if the organization wishes to do so. Findings from this study show that roughly 50% of the respondents have taught a distance education course without a clear understanding of a shared vision. It is anticipated that the rate of adoption will continue. Findings show that a majority of the respondents who had not taught a distance education course plan to do so in the next two years.

**Recommendation 3: Strategies that address long-lasting change and are visible to higher education should be developed.**

Findings from this study indicate that respondents possess different levels of concern regarding pedagogy, technology, diversification of program offerings, ability to reach new audiences, development of new ideas, and workload.

Nearly all of these concerns have been highlighted in previous studies; however, their incorporation into change strategies has not been well documented. Anecdotal findings suggest that workshops and other professional development have been conducted; however,
widespread adoption has not been a reality. This is in part due the difficulty of distance education initiatives in agricultural education fitting into the organization’s agenda.

Findings indicate that distance education has been accepted as part of the norms and values and has been accepted as part of the culture, indicating that it has become an ongoing element. However, findings also indicate that the infrastructure issues such as work load, organizational ability to react, and its ability to realistically reach new audiences and diversify agricultural education offerings are holding distance education efforts at the beginning implementation stage.

Schein (1992) stated that artifact recognition is difficult to decipher as a whole because of individual perceptions and attitudes. Distance education has been accepted as part of the agricultural education culture; however, it is just beginning to be a visible part of the agricultural education.

**Recommendation 4:** The mission, vision, goals, and other cultural aspects of higher education should be integrated with distance education to achieve more in order to achieve sustainable initiatives.

A modification of the planned change model created by Robbins (1990) is suggested. Modifications to the model were made based on the literature review, findings, and the researcher’s personal experience working in a variety of public and for-profit organizations.
The major modification to the model was the inclusion of a guide in the move section of the change process. The incorporation of the mission, vision, and goals as well as the cultural components should provide a means for the change to become an espoused value. A consensus should be reached and the group force, which carries it forward, will provide the stability the change needs to become a long-lasting change.

As higher education begins to place more emphasis on its mission, vision, and goals it will undoubtedly begin to realize the importance of constructing change strategies that include this tripartite as a means to encourage adoption and to move the change from an underlying assumption to an espoused value.
This modification provides a means so that the organization can rapidly address the needs of the lifelong learner even though it appears to be another level of bureaucracy. Admittedly, it is another level of bureaucracy; however, if implemented correctly the mission, vision, and goals will be modified to become the backbone for sustained change.

**Recommendation 5: An organizational cultural analysis at different levels in higher education needs to be routinely conducted.**

The aforementioned recommendations can all be connected to the need to understand the organization, its structure, and culture. It would be difficult to follow any of the recommendations without an understanding of the faculty culture in which the initiatives are being implemented. Bates (2000) stated that faculty is the governing body of the institution and without garnering its support, change within the organization is almost impossible.

Schein (2001) stated four reasons why culture needs to be understood: 1) "Cultural analysis illuminates subcultural dynamics within organizations" (p. xii), 2) Cultural analysis is necessary if we are to understand how new technologies influence and are influenced by organizations" (p. xii), 3) Cultural analysis is necessary for management across national and ethnic boundaries" (p. xii), and 4) "Organizational learning, development, and planned change cannot be understood without considering culture as a primary source of resistance to change" (p. xii).

By understanding the culture of the organization, management can use this understanding to interpret and design an effective and efficient change process. Understanding the culture of the organization is critical as faculty continue to explore distance education as a means to address the ever-changing needs of the lifelong learner.
Recommendations for Further Research

As higher education continues to implement and adopt business-sector management and organizational practices, it will be in a constant state of chaos since the existing structure is ill-equipped to address the rapid changes needed to address the environmental changes and pressures put upon it. This study suggests the following research possibilities:

1) Murphy, and Terry (1998a) called for additional research in the areas of organization and faculty culture as they relate to distance education. This study confirms the need for further research in these two areas.

2) A longitudinal study should be considered, which focuses on the communication network regarding the role of distance education in the mission, vision, and goals; and cultural changes. A longitudinal study is critical because collaborative efforts among institutions have increased but more importantly so that institutions can understand each others culture and commitment in order to successfully implement activities and programs. This is not to downplay the need for understanding the internal workings of the organization but rather addressing a rapidly changing world where private and public funders and government agencies are involved in collaborative efforts.

3) Research should be conducted within the rank of assistant professor specifically looking at the cultural, communication, reward system, and incentives for participating in distance education. This specific group is the future of the agricultural education profession and is entering the profession with greater technological skills and in some cases more management experience than ever seen before. Administrators need to be cognizant of their needs and concerns as well as their commitment to the mission, vision, and goals of the
organization so that their skills can be addressed in faculty policies and procedures (i.e. promotion and tenure) and incorporated into change strategies.

As higher education continues to adopt business-sector practices, increased attention on the humanistic aspects of management will be more important today than ever before. This is especially true as program and delivery methods continue to adjust to rapidly changing technology-driven environment. In addition, as society pressures higher education for anytime-anywhere learning, the people who deliver this education will need to be acutely aware of their environment.
APPENDIX A.

HUMAN SUBJECTS APPROVAL FORM
DATE: June 24, 2002
TO: Paula Teig
FROM: Janell Meldren, IRB Administrator
RE: “Strategic Visioning for Online Delivery Systems at a Land-Grant Institution” IRB ID 01-613
TYPE OF APPLICATION: ☐ New Project ☑ Continuing Review

The project, “Strategic Visioning for Online Delivery Systems at a Land-Grant Institution” has been approved for one year from its IRB approval date July 26, 2002. University policy and Federal regulations (45 CFR.46) require that all research involving human subjects be reviewed by the Institutional Review Board (IRB) on a continuing basis at intervals appropriate to the degree of risk, but at least once per year.

Any modification of this research project must be submitted to the IRB for prior review and approval. Modifications include but are not limited to: changing the protocol or study procedures, changing investigators or sponsors (funding sources), including additional key personnel, changing the Informed Consent Document, an increase in the total number of subjects anticipated, or adding new materials (e.g., letters, advertisements, questionnaires).

You must promptly report any of the following to the IRB: (1) all serious and/or unexpected adverse experiences involving risks to subjects or others; and (2) any other unanticipated problems involving risks to subjects or others.

The PI must retain the signed consent documents for at least three years past completion of the research activity. If the principal investigator terminates association with the University before that time, the signed informed consent documents should go to the DEO to be maintained.

You are expected to make sure that additional key personnel who are involved in human subjects research complete training prior to their interactions with human subjects. Web based training is available from our web site.

Upon completion of the project, a Project Closure Form will need to be submitted to the Human Subjects Research Office to officially close the project. If data collection or contact with the subjects will continue beyond the approval date, you will need to fill out a Continuing Review/and or Modification Form before the approval’s expiration date. Renewal is the PI’s responsibility, but as a reminder, you will receive an email or letter notifying you approximately a month in advance that the expiration date is approaching.

Both of these forms are on the Human Subjects Research Office web site at: http://grants-svr.adm.in.iastate.edu/VPR/humansubjects.html.
Office Use Only

Promt ID

Iowa State University

Continuing Review and/or Modification of Research Involving Human Subjects

(Please type the information on this form)

One copy of this form and changed documents should be submitted to the

SECTION I: PI/Project Information

1. I agree to provide the proper surveillance of this project to ensure that the rights and welfare of the human subjects are protected. I will report any adverse reactions to the committee. Additions to or changes in research procedures after the project has been approved will be submitted to the committee for review. I agree that all key personnel involved in conducting human subjects research will receive training in the protection of human subjects. I agree to request renewal of approval for any project continuing more than one year.

2. Type of Submission:
   - Continuing Review (Fill in sections I & II) (Continuing Review cannot be approved up to 30 days prior to the project's original approval date)
   - Modification (Fill in sections I & III)
   - Continuing Review & Modification (Fill in sections I, II, & III)

3. Date of Last IRB Approval: 6/25/02

4. IRB ID #: 01-613

5. Title of Project (If title has changed since original approval, please provide both titles): Strategic Visioning for Online Delivery Systems at a Land-Grant Institution

6. Funding Source:

7. Have key personnel been added since last approval?  No  Yes If yes, please list. (see part III for signature requirements)

Paula Teig
Typed name of principal investigator

Date
Signature of principal investigator

Aes:E
Department
2955 Food Science
Address for correspondence

515-294-3728  pteig@iastate.edu
Phone number and email

If student project:

Typed name of major professor or supervisor
W. Wade Miller  Harold R. Crawford

Date
Signature

IRB Approval:

Rick Sharp
IRB Chair

Date
Signature of IRB Chair

IRB Review Date
APPENDIX B.

SURVEY INSTRUMENT AND CORRESPONDENCE
The Current State of Distance Education in Agricultural Education

Thank you for participating in this survey. Your responses will remain confidential. All surveys will be destroyed during the month of August, 2003. The purpose of this survey is to identify the current state of distance education in Agricultural Education. It will also assist in identifying barriers and motivations for using distance education. If you have questions about the survey, please do not hesitate to contact me at 515.294.3728 or by email at pteig@iastate.edu. Again, thank you for participating in this survey.

Part I. Distance Education/Technology: The purpose of this section is to gather information regarding your adoption of distance education technology. To answer, check the appropriate box(es).

1. Have you taught a distance education course? YES ☐ NO ☐
2. Have you used any type of technology in teaching face to face courses? YES ☐ NO ☐
3. What delivery technologies have you used (please check all that apply): Videotape | Satellite ☐ CD ROM | Videoconferencing | Two-way interactive | Correspondence | Cassette | WWW/Internet ☐ ☐ ☐
4. What method of delivery technologies or combination did you find to be the most: (Fill in response)
   ☑ Rewarding from an instructor’s point of view:
   ENTER TEXT HERE
   ☑ Efficient in delivery of the course:
   ENTER TEXT HERE
5. I have a website for one or more of my courses. Yes ☐ No ☐
6. Which statement best describes your current situation in regards to distance education. (Please mark the statement that best describes you).
   ☐ I need long periods of deliberation before I would teach at a distance
   ☐ I will wait until distance education is a matter of academic or professional necessity
   ☐ I am suspicious of all new technology innovations
   ☐ I am willing to teach at a distance but need to think through my actions
   ☐ I am willing to be the leader in distance education in distance education
7. If you have NOT taught at a distance, when do you see yourself adopting it during the next:
   Years < 1 2 3 4 5 6 7 8 9 10 Never Not Applicable
Part II. Organizational Structure – Please indicate how close each statement comes to your view by placing an X in the appropriate column.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Definitely Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Definitely Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance education can stimulate a change in educational strategies within the AgEd profession.</td>
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<tr>
<td>Distance education is an anomaly in my department</td>
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<td>Higher education must change how they do business to meet the needs of the lifelong learner.</td>
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<td>My department believes distance education is able to address the societal needs of lifelong learning.</td>
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<tr>
<td>Faculty should be cautious about making changes to the higher education system.</td>
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<tr>
<td>The organizational structure at my campus addresses the structural needs of distance education.</td>
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</tr>
<tr>
<td>Administrators make decisions without faculty input on most distance education initiatives.</td>
<td></td>
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</tr>
<tr>
<td>In order for distance education to continue growing at my campus, it will need to become institutionalized.</td>
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<tr>
<td>I think my department's commitment to distance education could be much stronger.</td>
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<tr>
<td>It will take a higher level than college administration to make a change in awareness of distance education in the promotion and tenure system.</td>
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<tr>
<td>Faculty are the most valuable resource in my department's distance education efforts.</td>
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<tr>
<td>My department has increased its efforts in strengthening distance education initiatives each year.</td>
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<tr>
<td>My department has accepted distance education as a part of our agricultural education culture.</td>
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<tr>
<td>In my department, faculty, staff and administration are primarily concerned with departmental survival rather than programmatic survival.</td>
<td></td>
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</tr>
<tr>
<td>My campus is committed to distance education but it is valued more at the department and/or college levels.</td>
<td></td>
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</tr>
<tr>
<td>The traditional land-grant mission of teaching, research, and extension can be enhanced through distance education.</td>
<td></td>
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<tr>
<td>I am one of the most adaptive persons in my department when it comes to meeting the challenges of using technology.</td>
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<tr>
<td>New distance education initiatives are often decided by only a few top level individuals.</td>
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<tr>
<td>My department is more reactive than proactive in the distance education arena.</td>
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<tr>
<td>My campus has multiple distance education agendas; as a result there seems to be entities at odds with each other.</td>
<td></td>
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</tr>
</tbody>
</table>
Distance education is a political agenda item in my department.
Distance education efforts are compatible with the norms and values of my department.
Distance education is held in the same regard as "the way things have always been done" in my department.

Part III. How I feel about distance education? This section focuses on how you feel distance education is affecting or would affect you. Please respond to each statement based on the introductory statement of "I am concerned about..." Please use the following scale:

SD = Strongly Disagree, D = Disagree, A = Agree, SA = Strongly Agree

<table>
<thead>
<tr>
<th>Statement</th>
<th>Definitely Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Definitely Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The opportunity to conduct research in distance education</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Whether a shared vision exists for distance education at the college level</td>
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<tr>
<td>Whether distance education is addressed in my campus strategic plan</td>
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<tr>
<td>Keeping current with distance education technologies</td>
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<tr>
<td>Slow implementation of distance education</td>
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<tr>
<td>Having my job description include teaching at a distance</td>
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<tr>
<td>Support and encouragement from the dean or chair to teach at a distance</td>
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<tr>
<td>A change in working conditions (i.e., hours, location) for</td>
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<tr>
<td>My institution not committing enough resources for a quality</td>
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<tr>
<td>Monetary support for participation (i.e., stipend, overload)</td>
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<tr>
<td>The expectation by higher level administration that faculty engage in</td>
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<tr>
<td>as an add-on responsibility</td>
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<tr>
<td>The opportunity to develop new ideas using distance education</td>
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<tr>
<td>The opportunity for position visibility at other institutions/colleges</td>
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<tr>
<td>Ability to achieve professional prestige and status</td>
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<tr>
<td>Availability of grants for materials/expenses/programs</td>
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<tr>
<td>How my department will consider distance education efforts in my review</td>
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<tr>
<td>My ability to change from F-2-F teaching to teaching at a distance</td>
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<tr>
<td>My overall job satisfaction</td>
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<tr>
<td>The availability of technical support</td>
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<tr>
<td>An opportunity for career advancement based on distance education</td>
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<tr>
<td>The effect of distance education on my promotion and tenure efforts</td>
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<tr>
<td>Acquiring release time from existing duties to develop distance</td>
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<tr>
<td>A lack of consensus among faculty, staff and administrators regarding</td>
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<tr>
<td>How will my involvement in distance education affect my salary increases</td>
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<tr>
<td>The ability to have course flexibility using distance education methods</td>
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<tr>
<td>If DE will lead to diversified agricultural education program offerings</td>
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<tr>
<td>The ability to realistically reach new audience through distance education</td>
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<tr>
<td>The support and encouragement from institutional administrators</td>
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<tr>
<td>Distance education efforts in my department becoming stagnated</td>
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<tr>
<td>My ability to assist students to learn better using distance education</td>
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<tr>
<td>How my colleagues outside the department will view distance education</td>
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<tr>
<td>If a clear understanding exists about distance education in the overall</td>
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<tr>
<td>The lack of collaboration among various disciplines and institutions in</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>The faculty workload associated with distance education</td>
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</tr>
</tbody>
</table>
I am concerned about...

<table>
<thead>
<tr>
<th>SD</th>
<th>D</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comments made by colleagues about distance education teaching experiences</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The quality image of distance education courses as perceived by students</td>
<td></td>
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</tr>
<tr>
<td>My content not being conducive for distance delivery</td>
<td></td>
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<tr>
<td>My administrator's idea of what it takes to have a quality distance education course</td>
<td></td>
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<tr>
<td>Resistance to change by administrators</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The effect on my tenure, promotion, recognition and salary</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty, staff and administration disagreeing over common goals associated with distance education</td>
<td></td>
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</tr>
<tr>
<td>The institution's ability to react to environmental changes needed in the organizational structure to deliver distance education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My personal knowledge of distance education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Availability of assistance to develop curriculum for distance education</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Part IV. Looking towards the future. *This section deals with your beliefs about the direction and future impact distance education will have on the agricultural education profession.*

In what ways do you see distance education being used to address the needs of life-long learning, training, etc?

ENTER TEXT

What distance education trends do you foresee occurring in Agricultural Education in the next...

Year?

ENTER TEXT

Five Years?

ENTER TEXT

What do you feel will have to happen at your institutional level to make these trends a reality?

ENTER TEXT
Part V. Demographic Information: Please circle, check or fill in the responses which best fit your situation.

1. What is your current rank?
   Adjunct/Temporary Faculty  ☐  Asst. Professor ☐  Assoc. Professor ☐  Professor ☐  Instructor ☐

2. Is your appointment: Part time ☐, is so what is your % _____ or Full Time ☐

3. How is your current appointment divided? Please report by percentage.
   Research/Scholarship _____  Teaching _____  Extension/Service _____  Administration _____

4. If you reported Administration, please check which level you are at:
   Dept Chair ☐  College Admin. ☐

5. Have you previously held an administrative position? Yes ☐ (if so go to question 6)  No ☐

6. How many years did you hold your administrative position? ☐

7. In your present position, are you: Tenured - Y ☐  N ☐  OR on a Tenure Track - Y ☐  N ☐  or Neither ☐

8. What year did you receive your doctorate? 19 ☐  20 ☐  NA ☐

9. How long have you been in a teaching position? _____ years

10. Please estimate the number of students you instruct in an academic year?
    _____ Undergraduate
    _____ Graduate
    _____ Nonformal/Informal
Questionnaire

Dear AAAE Member,

Thank you for taking the time to participate in my doctoral study. Please follow the steps to access the site, download the software (if needed) and submit the survey.

The approximate time to complete this questionnaire is 17 minutes.

Steps for filling out the questionnaire.

NOTE: Please fill this questionnaire out using a PC or a new G4 MAC.

The pdf file is somewhat large and may take a few minutes to fully load.

Step 1: Securing the Adobe Reader software
In order to open the file, you must have Adobe Acrobat Reader 5 installed. If you do not have the current version, you can get a free copy by clicking here.

Step 2: Opening the survey
Click here to start loading the pdf file. If it asks you to save the file then you may not have Adobe Acrobat Reader 5.

Wait until the file has fully loaded. This may take sometime depending on how fast your internet connect speed is.

Step 3: Initial Step - Entering the code.
In the pre-notice email and the letter you received, a code has been provided. Please enter the code, in the designated box, before you start the survey. Thank you.

Step 4: Completing the survey
To answer many of the questions you will select a circle or place a check mark, other questions are open-ended. To answer text-based questions you will need to highlight the words "Enter text here", press the delete key and begin typing in that spot.

Step 5: Finishing the survey
Once you have completed the questionnaire, click the SUBMIT button. You will then be redirected to a new page that indicates you have submitted the questionnaire.

If you have any encounter trouble filling out or submitting the questionnaire, feel free to contact me at pteig@iu.edu

Thank you,

Paula Teig, Doctoral Candidate and Dr. Wade Miller, Major Professor
To: Paula M Teig <pteig@iastate.edu>
From: Paula M Teig <pteig@iastate.edu>
Subject: Pre-notice Request for Participation in Online Dissertation Supervised by Dr. Wade Miller
Cc: 
Bcc: 
Attached: 

Dear Dr.

The purpose of this email is to make you aware of a dissertation study regarding the current state of distance education in agricultural education departments across the nation. The survey is designed to address organizational structure, strategy as well as identify new and reassess existing motivations for utilizing distance education by faculty and instructors.

The survey is being supervised by Dr. Wade Miller and conducted by Paula Teig, Doctoral Candidate.

The survey will be transmitted without IP encoding. The encrypted submissions will come directly to and processed by Paula.

The results of the survey will be available on Paula's personal website following her defense, which is scheduled for late spring, 2003. If you would like to have a results from your region, please contact me (pteig@iastate.edu) and I will be more than happy to provide you with the information.

If you would prefer to complete the survey immediately, please use the following URL and code. If you choose this option, please reply back to this email so a hard copy letter will not be sent to you. You will then need to follow the URL given below and complete the survey.

http://ifafsnrep.ag.iastate.edu/paula/questionnaire.html

Code:

If I have not received a reply to this email by Friday, December 6, 2002 I will send a hardcopy letter to you.

Please direct any questions to me at pteig@iastate.edu.

Thank you for your participation in my dissertation study.

Paula Teig

Paula M. Teig
Doctoral Candidate
Iowa State University
Department of Agricultural Education
2955 Food Science
Ames, IA 50011
To: Pauia M Teig <pteig@iastate.edu>
From: Pauia M Teig <pteig@iastate.edu>
Subject: Additional request as a result of your participation in the online dissertation survey supervised by Dr. Wade Miller
Cc: 
Bcc: 
Attached: 

Dear Dr. [Name],

Help! First, I would like to thank you for participating in my doctoral study survey, conducted earlier in December. However, we discovered some anomalies in the returned surveys. I did receive a strong number of completed instruments to the pre-notification email. I sincerely appreciate your quick response to that email notification.

As the results started to come back in Dr. Miller and I began to notice, what we viewed as irregularities with the data. These irregularities were not present during the field test. Upon further investigation, we discovered a programming error with the Adobe software and also an update in the processing software at Planet PDF (the CGI script site). This combination resulted in nearly all the results being processed as strongly or definitely disagree and everyone reporting their position as an adjunct instructor, for example. The issues have been corrected and subsequently the field tests have been run again. We are confident there are no issues for this survey run.

In consultation with Dr. Miller, we have decided those respondents who answered the survey online would be contacted again, via email and asked to complete the instrument again. The other respondents will be receiving a hard copy version. If you would rather receive the instrument in hardcopy form I will be happy to send it to you.

I apologize for this inconvenience as I am well aware each you has a busy schedule. However, if you would take the time to complete the survey I would be very appreciative.

I would like to have your input by January 16, 2003.

For your convenience I have provided the link to the site as well as your code number. http://ifafsnrep.aq.iastate.edu/paula/questionnaire.html

Your code number is 
Please enter your code number at the top of the instrument.

Thank you for your participation in my doctoral study. Again, I apologize for this inconvenience.

If you have questions or comments, please contact me via email or by phone (515)294-3728.

Paula

Paula M. Teig
Doctoral Candidate
January 17, 2003

Dear Dr.

The purpose of this letter is to provide you an opportunity to participate in a doctoral study on faculty values and organizational change as they relate to adoption or continuation of distance education in agricultural education. The study is being conducted by Paula Teig and supervised by Dr. Wade Miller.

Approximately one month ago, you received a pre-notification email requesting your participation in this study. At that time, you were given an URL to a site where you could complete the survey online. You are still able to complete this instrument online by going to http://ifasurep.ag.iastate.edu/paula/questionnaire.htm. Your code number is Please enter the code number in the designated box at the top of the instrument.

If you decide to participate in this study and do not wish to complete the online instrument, a hard copy survey has been included in this mailing. Please complete the enclosed survey and return it in the self-addressed stamped envelope by February 5, 2003. All responses will remain confidential. The completed instruments will be destroyed August, 2003.

If you choose to not participate in this study, please indicate this by writing DO NOT WANT TO PARTICIPATE on the front page of the instrument and return it in the self-addressed stamped envelope.

If you have questions about this survey or the study, please contact me at 515-294-3728 or by email at pteig@iastate.edu.

Thank you for your consideration of this request.

Sincerely,

[Signature]

Paula Teig  
Graduate Student

[Signature]

Dr. Wade Miller  
Professor
APPENDIX C.

LIST OF INSTITUTIONS
List of Institutions

Alabama
- Auburn University
- Alabama A&M University

Arizona
- University of Arizona

Arkansas
- University of Arkansas
- Arkansas State University
- Southern Arkansas University

California
- University of California, Davis
- California State Polytechnic University, Pomona
- California State Polytechnic University, San Luis Obispo
- California State University, Chico
- California State University, Fresno

Colorado
- Colorado State University

Connecticut
- University of Connecticut

Delaware
- University of Delaware
- Delaware State University

Florida
- University of Florida
- Florida A&M

Georgia
- University of Georgia
- Fort Valley State University

Idaho
- University of Idaho

Illinois
- University of Illinois
- Illinois State University
- Southern Illinois University
- Western Illinois University
List of Institutions, continued.

Indiana
Purdue University

Iowa
Iowa State University

Kansas
Kansas State University

Kentucky
University of Kentucky
Morehead State University
Murray State University
Western Kentucky University

Louisiana
Louisiana State University
University of Louisiana at Lafayette

Maryland
University of Maryland Eastern Shore

Massachusetts
University of Massachusetts

Michigan
Michigan State University

Minnesota
University of Minnesota
University of Minnesota, Crookston

Mississippi
Mississippi State University
Alcorn State University

Missouri
University of Missouri
Central Missouri State University
College of the Ozarks
Northwest Missouri State University
Southwest Missouri State University

Montana
Montana State University

Nebraska
University of Nebraska

Nevada
   University of Nevada

New Hampshire
   University of New Hampshire

New Jersey
   Rutgers University

New Mexico
   New Mexico State University

New York
   Cornell University
   State University of New York at Oswego

North Carolina
   North Carolina State University
   North Carolina A&T State University

North Dakota
   North Dakota State University

Ohio
   The Ohio State University

Oklahoma
   Oklahoma State University
   Panhandle State University

Oregon
   Oregon State University

Pennsylvania
   The Pennsylvania State University

Puerto Rico
   University of Puerto Rico

South Carolina
   Clemson University

South Dakota
   South Dakota State University
List of Institutions, continued.

Tennessee
University of Tennessee
University of Tennessee at Martin
Tennessee State University
Middle Tennessee State University

Texas
Texas A&M University
Texas A&M University –Commerce
Texas A&M University –Kingsville
Prairie View A&M University
Sam Houston State University
Southwest Texas State University
Stephen F. Austin State University
Tarleton State University
Texas Tech University
West Texas A&M University

Utah
Utah State University

Vermont
University of Vermont

Virginia
Virginia Tech
Virginia State University

Washington
Washington State University

West Virginia
West Virginia University

Wisconsin
University of Wisconsin –Madison
University of Wisconsin –Platteville
University of Wisconsin –River Falls

Wyoming
University of Wyoming
APPENDIX E.

ADDITIONAL TABLES
Table E-1. Responses to organizational structure statements

<table>
<thead>
<tr>
<th>Statement</th>
<th>N</th>
<th>DD</th>
<th>D</th>
<th>A</th>
<th>DA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance education can stimulate a change in educational strategies within the AgEd profession.</td>
<td>175</td>
<td>1(5)</td>
<td>11(6.3)</td>
<td>117(66.9)</td>
<td>46(26.3)</td>
</tr>
<tr>
<td>Distance education is an anomaly in my department</td>
<td>171</td>
<td>40(23.4)</td>
<td>82(48.0)</td>
<td>39(22.8)</td>
<td>10(5.8)</td>
</tr>
<tr>
<td>Higher education must change how they do business to meet the needs of the lifelong learner</td>
<td>174</td>
<td>1(5)</td>
<td>12(6.9)</td>
<td>104(59.8)</td>
<td>57(32.8)</td>
</tr>
<tr>
<td>My department believes distance education is able to address the societal needs of lifelong learning</td>
<td>171</td>
<td>2(1.2)</td>
<td>37(21.6)</td>
<td>104(60.8)</td>
<td>28(16.4)</td>
</tr>
<tr>
<td>Faculty should be cautious about making changes to the higher education system</td>
<td>175</td>
<td>22(12.6)</td>
<td>85(48.6)</td>
<td>65(37.1)</td>
<td>3(1.7)</td>
</tr>
<tr>
<td>The organizational structure at my campus addresses the structural needs of distance education</td>
<td>173</td>
<td>11(6.4)</td>
<td>54(31.2)</td>
<td>88(50.9)</td>
<td>20(11.6)</td>
</tr>
<tr>
<td>Administrators make decisions without faculty input on most distance education initiatives</td>
<td>174</td>
<td>17(9.8)</td>
<td>101(58.0)</td>
<td>48(27.6)</td>
<td>8(4.6)</td>
</tr>
<tr>
<td>In order for distance education to continue growing at my campus, it will need to become institutionalized</td>
<td>173</td>
<td>4(2.3)</td>
<td>51(29.5)</td>
<td>100(57.8)</td>
<td>18(10.4)</td>
</tr>
<tr>
<td>I think my department's commitment to distance education could be much stronger</td>
<td>176</td>
<td>11(6.3)</td>
<td>72(40.9)</td>
<td>68(38.6)</td>
<td>25(14.2)</td>
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<tr>
<td>It will take a higher level than college administration to make a change in awareness of distance education in the promotion and tenure process</td>
<td>174</td>
<td>10(5.7)</td>
<td>67(38.5)</td>
<td>65(37.4)</td>
<td>32(18.4)</td>
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<tr>
<td>Faculty are the most valuable resource in my department's distance education efforts</td>
<td>175</td>
<td>2(1.1)</td>
<td>16(9.1)</td>
<td>89(50.9)</td>
<td>68(38.9)</td>
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<tr>
<td>My department has increased its efforts in strengthening distance education initiatives each year</td>
<td>175</td>
<td>8(4.6)</td>
<td>39(22.3)</td>
<td>89(50.9)</td>
<td>39(22.3)</td>
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<tr>
<td>My department has accepted distance education as a part of our agricultural education culture</td>
<td>173</td>
<td>7(4.0)</td>
<td>39(22.5)</td>
<td>89(51.4)</td>
<td>38(22.0)</td>
</tr>
<tr>
<td>In my department, faculty, staff and administration are primarily concerned with departmental survival rather than programmatic survival</td>
<td>173</td>
<td>28(16.2)</td>
<td>102(60.0)</td>
<td>34(19.7)</td>
<td>9(5.2)</td>
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<tr>
<td>My campus is committed to distance education but it is valued more at the department and/or college levels</td>
<td>172</td>
<td>8(4.7)</td>
<td>85(49.4)</td>
<td>72(41.9)</td>
<td>7(4.1)</td>
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<tr>
<td>The traditional land-grant mission of teaching, research and extension can be enhanced through distance education</td>
<td>174</td>
<td>4(2.3)</td>
<td>7(4.0)</td>
<td>88(50.6)</td>
<td>75(43.1)</td>
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<td>I am one of the most adaptive persons in my department when it comes to meeting the challenges of using technology</td>
<td>174</td>
<td>6(3.4)</td>
<td>11(6.3)</td>
<td>61(35.1)</td>
<td>36(20.7)</td>
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<td>New distance education initiatives are often decided by only a few top level individuals</td>
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<td>12(6.9)</td>
<td>86(49.4)</td>
<td>64(36.8)</td>
<td>12(6.9)</td>
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<td>My department is more reactive than proactive in the distance education arena</td>
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<td>24(14.0)</td>
<td>85(49.4)</td>
<td>59(34.3)</td>
<td>4(2.3)</td>
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<tr>
<td>My campus has multiple distance education agendas as a result there seems to be entities at odds with each other</td>
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<td>4(2.3)</td>
<td>100(58.1)</td>
<td>58(33.7)</td>
<td>10(5.8)</td>
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<td>Distance education is a political agenda item in my department</td>
<td>172</td>
<td>24(14.0)</td>
<td>110(64.0)</td>
<td>32(18.6)</td>
<td>6(3.5)</td>
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<tr>
<td>Distance education efforts are compatible with the norms and values of my department</td>
<td>173</td>
<td>5(2.9)</td>
<td>26(15.0)</td>
<td>117(67.6)</td>
<td>25(14.5)</td>
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Table E – 2. Responses to statements of concern

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<th>Statement</th>
<th>N</th>
<th>SD</th>
<th>D</th>
<th>A</th>
<th>SA</th>
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<tr>
<td>The opportunity to conduct research in distance education</td>
<td>175</td>
<td>39 (22.3)</td>
<td>85 (48.6)</td>
<td>46 (26.3)</td>
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<tr>
<td>Whether a shared vision exists for distance education at the college level</td>
<td>176</td>
<td>15 (8.5)</td>
<td>59 (33.5)</td>
<td>88 (50.0)</td>
<td>94 (8.0)</td>
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<tr>
<td>Whether distance education is addressed in my campus strategic plan</td>
<td>176</td>
<td>22 (12.5)</td>
<td>86 (48.9)</td>
<td>59 (33.5)</td>
<td>9 (5.1)</td>
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<tr>
<td>Keeping current with distance education technology</td>
<td>171</td>
<td>6 (3.5)</td>
<td>30 (17.5)</td>
<td>96 (56.1)</td>
<td>39 (22.8)</td>
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<tr>
<td>Slow implementation of distance education</td>
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<td>10 (5.7)</td>
<td>77 (44.0)</td>
<td>74 (42.3)</td>
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<tr>
<td>Having my job description include teaching at a distance</td>
<td>175</td>
<td>27 (15.4)</td>
<td>98 (56.0)</td>
<td>44 (25.1)</td>
<td>6 (3.4)</td>
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<tr>
<td>Support and encouragement from the dean or chair to teach at a distance</td>
<td>176</td>
<td>18 (10.2)</td>
<td>34 (47.7)</td>
<td>64 (36.4)</td>
<td>10 (5.7)</td>
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<tr>
<td>A change in working conditions for distance education participation</td>
<td>175</td>
<td>11 (6.3)</td>
<td>79 (45.1)</td>
<td>62 (35.4)</td>
<td>23 (13.1)</td>
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<tr>
<td>My institution no committing enough resources for a quality distance education program</td>
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<td>16 (9.1)</td>
<td>54 (30.9)</td>
<td>60 (34.3)</td>
<td>45 (25.7)</td>
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<tr>
<td>Monetary support for participation</td>
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<td>13 (7.4)</td>
<td>45 (25.6)</td>
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<tr>
<td>The expectation by higher level administration that faculty engage in distance education as an add on responsibility</td>
<td>176</td>
<td>12 (6.8)</td>
<td>65 (36.9)</td>
<td>64 (36.4)</td>
<td>35 (19.9)</td>
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<tr>
<td>The opportunity to develop new ideas using distance education</td>
<td>176</td>
<td>14 (8.0)</td>
<td>83 (47.2)</td>
<td>72 (40.9)</td>
<td>7 (4.0)</td>
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<tr>
<td>The opportunity for position visibility at other institutions</td>
<td>174</td>
<td>19 (10.9)</td>
<td>104 (59.8)</td>
<td>45 (25.9)</td>
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<tr>
<td>Ability to achieve professional prestige and status</td>
<td>176</td>
<td>28 (15.9)</td>
<td>101 (57.4)</td>
<td>42 (23.9)</td>
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<tr>
<td>Availability of grants for materials/expenses/programs</td>
<td>176</td>
<td>8 (4.5)</td>
<td>58 (33.0)</td>
<td>91 (51.7)</td>
<td>19 (10.8)</td>
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<tr>
<td>How my department will consider distance education efforts in my review</td>
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<td>19 (11.0)</td>
<td>81 (46.8)</td>
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<td>18 (10.4)</td>
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<tr>
<td>My ability to change from F2F teaching to teaching at a distance</td>
<td>175</td>
<td>29 (16.6)</td>
<td>77 (44.0)</td>
<td>54 (30.9)</td>
<td>15 (8.6)</td>
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<td>My overall job satisfaction</td>
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<td>The availability of technical support</td>
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<td>41 (23.4)</td>
<td>80 (45.7)</td>
<td>47 (26.9)</td>
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<tr>
<td>An opportunity for career advancement based on distance education instruction</td>
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<td>93 (52.8)</td>
<td>53 (30.1)</td>
<td>14 (8.0)</td>
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<tr>
<td>The effect of distance education on my promotion and tenure efforts</td>
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<td>30 (17.1)</td>
<td>80 (45.7)</td>
<td>45 (25.7)</td>
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<tr>
<td>Acquiring release time from existing duties to develop distance education courses</td>
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<td>9 (5.1)</td>
<td>45 (26.6)</td>
<td>81 (46.0)</td>
<td>41 (23.3)</td>
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<tr>
<td>A lack of consensus among faculty, staff and administrators regarding distance education</td>
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<td>15 (8.5)</td>
<td>60 (34.1)</td>
<td>75 (42.6)</td>
<td>26 (14.8)</td>
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<tr>
<td>How will involvement in distance education affect my salary increases</td>
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<td>84 (48.3)</td>
<td>56 (32.2)</td>
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<td>The ability to have course flexibility using distance education methods</td>
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<td>18 (10.3)</td>
<td>78 (44.6)</td>
<td>64 (36.6)</td>
<td>15 (8.6)</td>
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<tr>
<td>If distance education will lead to diversified agricultural education program offerings</td>
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<td>18 (10.3)</td>
<td>80 (45.7)</td>
<td>69 (39.4)</td>
<td>8 (4.6)</td>
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<tr>
<td>The ability to realistically reach new audiences through distance education</td>
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<td>67 (38.1)</td>
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<td>12 (6.8)</td>
</tr>
<tr>
<td>Statement</td>
<td>N</td>
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<td>A</td>
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<td>The support and encouragement from institutional administration</td>
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<td>14 (8.0)</td>
<td>75 (42.6)</td>
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<tr>
<td>Distance education efforts in my department becoming stagnant</td>
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<td>19 (10.9)</td>
<td>94 (53.7)</td>
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<td>My ability to assist students to learn better using distance education</td>
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<td>14 (8.0)</td>
<td>42 (24.0)</td>
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<td>How will colleagues outside the department view distance education efforts</td>
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<td>19 (10.9)</td>
<td>104 (59.4)</td>
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<td>If a clear understanding exists about distance education in the overall mission of the institution</td>
<td>174</td>
<td>12 (6.9)</td>
<td>70 (40.2)</td>
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<tr>
<td>The lack of collaboration among various disciplines and institutions in distance education</td>
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<td>62 (35.2)</td>
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<td>The faculty workload associated with distance education</td>
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<td>Comments made by colleagues about distance education teaching experiences</td>
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<td>21 (12.1)</td>
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<td>13 (7.5)</td>
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<td>The quality image of distance education courses as perceived by students</td>
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<td>9 (5.2)</td>
<td>43 (24.7)</td>
<td>90 (51.7)</td>
<td>32 (18.4)</td>
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<tr>
<td>My content not being conducive for distance education</td>
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<td>16 (9.2)</td>
<td>65 (37.4)</td>
<td>71 (40.8)</td>
<td>22 (12.6)</td>
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<td>My administrators idea of what it takes to have a quality distance education course</td>
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<td>16 (9.2)</td>
<td>81 (46.8)</td>
<td>52 (30.0)</td>
<td>24 (13.9)</td>
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<tr>
<td>Resistance to change by administrators</td>
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<td>25 (14.5)</td>
<td>101 (58.4)</td>
<td>37 (21.4)</td>
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<tr>
<td>The effect on my tenure, promotion, recognition and salary</td>
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<td>25 (14.4)</td>
<td>77 (44.3)</td>
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<tr>
<td>Faculty, staff and administration disagreeing over common goals associated with distance education</td>
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<td>14 (8.1)</td>
<td>89 (51.4)</td>
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<td>The institution's ability to react to environmental changes needed in the organizational structure to delivery education</td>
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<td>11 (6.3)</td>
<td>72 (41.4)</td>
<td>74 (42.5)</td>
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<td>My personal knowledge of distance education</td>
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<td>55 (31.6)</td>
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<td>Availability of assistance to develop curriculum for distance education</td>
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<td>10 (5.7)</td>
<td>47 (27.0)</td>
<td>85 (48.9)</td>
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