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Analyzing the Effect of Individual Factors and Organizational Context on Faculty Participation in Online Teaching

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ANALYZING THE EFFECT OF INDIVIDUAL FACTORS AND ORGANIZATIONAL CONTEXT ON FACULTY PARTICIPATION IN ONLINE TEACHING

by

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ABSTRACT

This quantitative study analyzed the influence of individual factors and institutional context on faculty participation in online teaching at public higher education institutions in the United States. Through an ex post facto design, cause and effect relationships were explored using statistical analysis of a large national data set. Variables in the data set directly related to the areas of interest in this study included interest in teaching, student-centered pedagogy, autonomy and control, instructional support, and institutional climate. Factors related to interest in teaching and institutional reward were statistically significant $(p<.01)$ in predicting participation in online teaching. These results support the assertion that faculty members are more likely teach online if they are interested in teaching and student-based pedagogical models, have access to faculty development related to teaching enhancement, and receive rewards for integrating technology into their teaching.

CHAPTER 1
INTRODUCTION

Introduction

Computers and the Internet have changed the way people seek and find

knowledge. Post-secondary education is no exception. Enrollment in distance learning

courses at postsecondary institutions in the United States grew at an average annual rate

of 17.3% from 2002-2011 (Allen & Seaman, 2013). Despite this growth, reported faculty

acceptance of the value and legitimacy of this form of instruction has changed little in

that time span, increasing less than three percent, from 27.6% in 2002, to 30.2% in 2011

(Allen & Seaman, 2013). In conjunction with this backdrop, public institutions of higher

education in the United States are currently operating in an environment of increased

demands and shrinking funding (Zumeta, Breneman, Callan, & Finney, 2012). Despite

faculty reticence, instructional technology, particularly the use of online and distant

learning, is widely perceived as a solution to the gap between capacity and resources.

Faculty have traditionally controlled the curriculum and instructional delivery

methods in higher education. The rapid growth of web-based technologies over the past

two decades has provided new instructional delivery platforms that bring both

opportunity and challenge to traditional faculty roles. The use of online learning

environments to improve educational attainment implies the redesign of courses and

delivery models. In that redesign, faculty are expected to master new technologies and

instructional styles while navigating role and organizational changes (Hartman, Dziuban,

& Brophy-Ellison, 2007). This reorganization disrupts institutionalized practices, and the

ways in which these changes are enacted vary by institution. Institutional practices can influence the ways in which faculty respond to these changes and to new expectations. Individual characteristics and institutional factors interact and lead to variation in faculty participation in online teaching. The educational context created by faculty is a powerful force, and faculty behaviors and attitudes have been found to have a dramatic effect on student learning and engagement (Umbach & Wawrzynski, 2005). Because faculty motivation and behaviors may influence the quality of instruction and educational attainment that can be achieved in the reorganization driven by online learning environments, understanding institutional factors that influence faculty participation is essential. The delivery of instruction at a distance is not new. The origins of distance learning can be found in the correspondence courses developed in mid-nineteenth century Europe and the United States in order to reach non-traditional student populations. These courses initially relied on mail as a delivery medium (Berg, 2005), but eventually incorporated multimedia technologies including slide lanterns, radio, television broadcasts, and videoconferencing, with the delivery media evolving as technology changed (Moore, 2003). An important difference between those delivery models and current modes of distance learning is that newer models rely primarily on web-based technologies, which facilitate increased interaction between and among students and instructors. Twenty years ago, Barr and Tagg (1995) called for a paradigm shift in higher education – a move from an instruction-centered approach to a learning-centered approach – in order to improve educational outcomes. In Barr and Tagg's Learning Paradigm, the faculty role shifts away from primarily delivering instruction (lecture) to primarily acting as designers of learning methods and environments. Research on the adoption of these student-centered approaches by faculty indicates that in practice this

paradigm has been slow to shift (DeAngelo et al., 2009). However, in the distance learning space, the use of web-based technologies that facilitate increased interaction between and among faculty and students accelerate that paradigm shift and its impact on the faculty role as provider of information (Mitchell & Geva-May, 2009; Schifter, 2000). This can be an uncomfortable shift for faculty who must learn to teach in ways much different from the ways in which they were taught. Resistance to this role change can impede faculty participation in distance learning (Beaudoin, 1990; Jaffee, 1998; Maguire, 2005; Schneckenberg, 2009). A deeper understanding of the factors that influence faculty motivation toward, and participation in, distance learning is needed to inform the continued development of online education models. This understanding should include the impact of institutional context on faculty motivation to participate in distance learning.

Several studies have identified a discrepancy between faculty and administrative perceptions of what motivates faculty toward online teaching (Maguire, 2005; Mitchell & Geva-May, 2009; Schifter, 2000). This discrepancy is cause for concern because many of the factors that can influence faculty participation are institutional in nature and under the control of campus administrators. Previous studies identified institutional factors that influence faculty participation in online teaching as workload, involvement in policy-making, recognition and reward, support structures, faculty autonomy, and organizational climate (Labach, 2001; Maguire, 2005; Schifter, 2000; Wolcott, 2003). Institutional factors that facilitate faculty participation in online teaching include recognition, availability of technical and instructional support, and alignment of distance learning with organizational values (Gannon-Cook, 2003; Maguire, 2005; Olcott & Wright, 1995; Schneckenberg, 2009; Simpson, 2010). As institutions move more purposefully into

online delivery of courses and programs, a greater understanding of the individual factors that influence faculty participation in online teaching, and how those are individual factors are influenced by organizational context, is needed to inform the continued development of distance learning at institutions of higher education. A clear understanding of faculty perceptions and motivations will enable campus leaders to design faculty support structures and to plan for appropriate policies and practices related to distance learning.

Statement of Problem

Despite the widespread growth of online distance learning in public institutions of higher education in recent years, its acceptance by full-time faculty has lagged behind institutional implementation. In their 10th annual study of online learning in the United States, Allen and Seaman (2013) reported that 30.2% of chief academic officers described their faculty as accepting the value and legitimacy of online education. That number rose only to 38.4% at institutions with fully online distance learning programs. In a direct survey of faculty, 86% of full-time faculty indicated that online courses were of lower quality with respect to interaction with students than traditional courses (Jaschik & Lederman, 2013). This gap between institutional ambition and faculty acceptance may have serious implications for sustaining faculty control over the development and delivery of instruction and related policies for distance learning. When faculty feel excluded from distance learning policy development and decision-making, they perceive the exclusion as a threat to their autonomy and control (Maguire, 2009; Mitchell & Geva-May, 2009).

Theoretical Framework

There is strong evidence that intrinsic factors are the primary motivators of

faculty interest in teaching online. Research continues to support the findings of Dillon and Walsh's (1997) formative literature review, which indicated that faculty are more motivated by intrinsic than extrinsic reasons to teach in distance learning modalities. Intrinsic motivators are those that have an internal origin; the desire to engage in an activity is driven by an interest or enjoyment in the activity itself and by the activity's congruence with personal values and beliefs. Faculty intrinsic motivators toward distance learning include a personal interest in the technology, intellectual curiosity, opportunity to improve teaching, and interest in developing new ideas (Dillon & Walsh, 1992; Maguire, 2005; Wolcott, 2003). Other researchers have asserted that while early adopters of distance learning were driven by intrinsic motivators, the second wave of faculty adopters are less enthusiastic and may require extrinsic incentives to participate (Gannon-Cook, 2003; Gannon-Cook, Ley, Crawford, & Warner, 2009).

Self-determination theory posits that social and cultural conditions that support an individual's experience of autonomy, competence, and relatedness foster the greatest internal motivation and engagement in activities, including enhanced persistence, performance, and creativity (Ryan & Deci, 2000). Intrinsic motivators are often moderated by external or contextual factors, which influence whether motivation and intent translate into participation. The research examined in the present study suggests that intrinsic factors are the primary motivators for faculty to participate in online teaching, and that extrinsic factors can then either inhibit or facilitate intrinsic motivation, further influencing faculty participation.

Mowday and Sutton (1993) defined organizational context as "stimuli and phenomena that surround and thus exist in the environment external to the individual" (p. 198). Those stimuli and phenomena, collectively referred to as institutional context in the

present study, are extrinsic factors that are institutional in nature. They include structural characteristics, organizational culture, support mechanisms, reward systems, and climate factors. The conceptual framework for the present study links the existing research on faculty participation in online teaching to change, organizational, and motivation theories in order to understand how individual and institutional factors interact and influence faculty participation in online teaching.

Purpose

The purpose of this quantitative study was to analyze the influence of individual factors and institutional context on faculty participation in online teaching at public higher education institutions in the United States. A clear understanding of the extent to which intrinsic motivation interacts with institutional factors to predict participation in distance learning can inform campus leaders and policy makers in the continued development of distance learning education models.

Research Questions

The present study's research questions examine both individual and contextual variables in order to increase understanding of the effects of institutional context on the participation of faculty in online teaching. Specifically, the five questions under investigation in the present study were:

(a) To what extent does faculty interest in teaching predict participation in online teaching?

(b) To what extent does faculty orientation toward student-centered instructional methods predict participation in online teaching?

(c) To what extent does perceived autonomy and control predict faculty participation in online teaching?

(d) To what extent does institutional climate predict faculty participation in online

teaching?

(e) To what extent does institutional support predict faculty participation in online teaching?

Hypotheses

Based on the review of literature in this study, two major subsets of hypotheses will guide the analysis of data. First, it is hypothesized that faculty interest in teaching and orientation toward student-centered pedagogy will be related to participation in online teaching. Faculty who report a high degree of interest in teaching will tend to have greater participation in online teaching. Faculty who report a high degree of involvement in student-centered pedagogy will tend to have greater participation in online teaching. Next, it is hypothesized that factors related to institutional context will interact with interest in teaching and student-centered pedagogy, resulting in variance across groups. Faculty interested in teaching and oriented toward student-centered pedagogy who experience high levels of autonomy and control, institutional support, and a positive institutional climate will be more likely to participate in online teaching.

Significance of the Study

Faculty motivation and the impact of institutional policies have not been given sufficient attention in the research on distance learning (Wolcott, 2003). While several studies (Beggs, 2000; Betts, 1998; Gannon-Cook, Ley, Crawford & Warner, 2009; Lee, 2001; Maguire, 2005; Schifter, 2000) have focused on factors that motivate faculty to participate in online teaching, results have been conflicting as to whether that motivation is primarily intrinsic or extrinsic. Additionally, the majority of the studies reported on research conducted at a single institution, rather than across institutions (Labach, 2011). Furthermore, existing research largely focuses on the application of distance learning

while ignoring context (Maguire, 2005; Mitchell & Geva-May, 2009; Perraton, 2000), and motivation cannot be adequately understood without an examination of the environment in which it occurs. While there has been significant work done on organizational culture and change in institutions of higher education, few studies have connected change as a result of the increase in distance learning to institutional context as a way of understanding faculty perception and participation. Little research has been conducted on the interaction between individual and institutional factors, and how institutional factors influence individual factors related to faculty participation in online teaching.

This study fills a gap in the literature by connecting bodies of research that have not been thoroughly linked in the past. Additionally, this research will analyze a large data set to determine how well intrinsic factors reported in the literature as driving faculty motivation toward participation in online teaching actually predict faculty participation, and further, to determine what effect institutional factors have on that predicted participation. More importantly, campus administrators can directly control many of the institutional factors being examined in the present study. The ability of campus administrators to have an effect on institutional context requires an understanding of its influence on faculty participation in online teaching in order to inform future practice.

Definition of Terms

For the purpose of the present study, the following operational definitions were used:

Autonomy. Freedom of choice; in self-determination theory, activities have greater value when individuals believe themselves to be the locus of control (Ryan & Deci, 2000).

Climate. Recurring patterns of behavior, attitudes, and feelings that characterize life in an organization.

Culture. Behaviors, beliefs, and espoused values that guide daily life in an organization.

Distance learning. A mode of instruction in which at least 80 percent of the course delivery occurs using some form of technology in which the student and instructor are separated by time, space, or both.

Intrinsic motivation. Impetus toward an activity because it is inherently interesting, enjoyable, or congruent with personal values.

Online teaching. The act of teaching a web-based distance learning course.

Institutional context. Broad term used in this study to include factors related to the way an institution functions, including structural characteristics, climate, culture, reward systems, and the influence of social positions and roles.

Pedagogy. Used in the present study as a general term to refer to the art and science of teaching. *Andragogy* more specifically describes "the art and science of helping adults learn" and teaching strategies that account for the differences between the education of children and adults (Knowles, 1970). However, *pedagogy* was the dominant term found in the educational research reviewed in this study and therefore will be used as a general term.

Self-determination theory. Theory of motivation stating that conditions supporting an individual's experience of *autonomy, competence,* and *relatedness* promote the most high quality forms of motivation and engagement in activities (Ryan & Deci, 2000).

Student-centered pedagogy. Instructional approach in which the faculty role shifts away from primarily delivering instruction (lecture) to acting primarily as designer of learning methods and environments in which students have high levels of interaction with the instructor, their peers, and the content.

Scope of the Study

This study was conducted using data from the 2010 Higher Education Research Institute (HERI) Faculty Survey. HERI is an interdisciplinary center for research,

evaluation, information, policy studies, and research training in postsecondary education at the University of California, Los Angeles. The HERI Faculty Survey collects national normative data related to teaching, research activities, and professional development, as well as issues related to job satisfaction and stress. The survey data include responses from 45,177 faculty members at 472 institutions of higher education in the United States. For the purposes of this study, those data were filtered to select only cases from public institutions. The scope was narrowed to public institutions because it is these institutions that are turning to online learning environments as a possible response to fiscal pressures and demands for increased access (Johnstone & Lane, 2013; Zumeta, Breneman, Callan, & Finney, 2012).

Organization of the Study

This introductory chapter presents background information to frame the study, a statement of the problem, purpose of the study, its significance, and the research questions under investigation. Chapter 2 contains a review of the relevant literature on growth of distance learning and its impact on faculty role, organizational theory, faculty development, human motivation theory, and faculty participation in distance learning within a change in higher education context. Chapter 3 offers an overview of the research methodology and data set utilized to address the research questions, including descriptions of procedures and data analysis strategies. Chapter 4 provides a thorough description of the results of this research methodology and discussion of the practical implications of these findings. Chapter 5 summarizes the study and its findings, along with major conclusions. That chapter concludes with recommendations for practical application and future research.

CHAPTER 2
LITERATURE REVIEW

Introduction

The present study focused on the factors that influence faculty participation in online teaching. This study's research questions examined both individual and contextual variables in order to increase understanding of the effects of institutional context on the participation of faculty in online teaching. Specifically, the five questions under investigation in the present study were:

(a) To what extent does faculty interest in teaching predict participation in online teaching?

(b) To what extent does faculty orientation toward student-centered instructional methods predict participation in online teaching?

(c) To what extent does perceived autonomy and control predict faculty participation in online teaching?

(d) To what extent does institutional climate predict faculty participation in online teaching?

(e) To what extent does institutional support predict faculty participation in online teaching?

Six bodies of literature were examined to develop a theoretical framework for the study (Figure 1). This chapter provides a literature review of (a) the growth of online learning and its impact on higher education and faculty role; (b) organizational theory, specifically as it relates to institutions of higher education; (c) change and innovation theory; (d) faculty development; (e) motivation theory; and (f) existing research on faculty participation in distance learning. The first section, a review of the growth of

online learning and its impact on higher education, provides the reader with a historical context in which to understand the significance of the research question. The review of literature related to organizational theory in higher education in the second section provides the conceptual framework for understanding the influence of organizational context in this study. Organizational context includes the structural characteristics, organizational culture, support mechanisms, reward systems, and climate factors present in institutions of higher education that may affect individual faculty behaviors. The third section's review of change and innovation theory establishes a foundation for understanding how change processes, such as the adoption of new instructional modalities, are enacted by individuals and by organizations. Innovation theory provides background for understanding how new ideas and technologies spread through a social system. In the fourth section, literature related to faculty development and its role in change processes is reviewed to provide a lens through which to view personal and organizational development, particularly as related to online teaching. Motivation theories are reviewed in the fifth section to provide a conceptual basis for understanding faculty impetus toward, and participation in, online teaching. Human motivation is a strong force in change processes, so consideration of the impact that individual perceptions of autonomy and control in a particular organizational context have on task meaning and the personal investment of time and effort enhance understanding of faculty adoption of new instructional methods. The last section examines the current state of knowledge related to faculty participation in distance learning in order to establish current understanding, identify gaps, and situate this study's research questions within that current state of knowledge.

Figure 1. Faculty Participation in Online Teaching Theoretical Framework.

The Growth of Online Education

Data from the National Center for Education Statistics (2011) indicate that 20% of undergraduates nationwide took at least one distance learning course in 2007-2008, an increase from 16% in 2003–2004. Post-baccalaureate students took their entire degree program through distance learning at a higher rate, 9%, than did undergraduate students, at 4%, in 2007-2008. Online distance-learning programs and courses are now widespread in public universities and those numbers have continued to increase with nearly 33% of U.S. college students taking at least one online course in 2010 (Hill, 2012; Kirshstein & Wellman, 2012). Initial growth in distance learning in higher education was ad hoc, with course development based on faculty interest and not usually aligned with a larger institutional strategy. Institutions typically undertook these early efforts because of a desire to extend access beyond their geographic boundaries or to improve the quality of

teaching for existing students (Kirshstein & Wellman, 2012; Miller & Schiffman, 2006). More recently, the growth of online offerings in public higher education has been driven by calls for an increase in the number of degrees produced (Fullan & Scott, 2009) during a time of increased competition from private for-profit schools and decreased state funding (St. John, Daun-Barnett, & Moronski-Chapman, 2013; Slaughter & Rhoades, 2004).

Policymakers and politicians are pressing for dramatic changes in the way higher education approaches the challenges of increased demands and decreased resources (Bruininks, Keeney, & Thorp, 2010; Hirschman & Hrabowski, 2011; Mehaffy, 2010; Pope, 2013; Troop, 2013). Technology-based instructional methods are frequently mentioned as a solution to decrease cost and increase access. The Lumina Foundation (2010) described this imperative:

> Today, the need for fundamental changes is inescapable. The demand for highly skilled workers is unavoidable, the economic effects of a better-educated nation unequivocal—the United States needs more college-educated workers than ever. A half century ago, higher education helped transform America's World War II fighting force into a powerful labor force. In unpredicted and unprecedented ways, colleges and universities expanded and met the challenge of educating millions of returning GIs. They responded with heart and innovation. Today, higher education faces another challenge. The road ahead can become a deep plunge into a fiscal morass, a financing disaster that results in severely limited opportunity—or it can become an invigorating time of innovation, strategic cutting and reinvestment, with a laser focus on student completion. (p. 9)

The technological changes that have impacted society at large in the last 20 years have

produced new models for delivering instruction using the Internet and other computer-based technologies. A variety of approaches that harness Internet and other computer-based technologies have been proposed as methods for increasing access and reducing instructional costs. While the number of public institutions offering some online courses has remained fairly stable over the past 10 years, the number of these same institutions offering one or more fully online degree programs has grown dramatically, from 48.9% in 2002 to 70.6% in 2012 (Allen & Seaman, 2013).

Despite the widespread growth of online learning in public institutions of higher education in recent years, faculty acceptance of and participation in online learning have lagged behind institutional implementation. In their 10th annual study of online learning in the United States, Allen and Seaman (2013) reported that 30.2% of chief academic officers described their faculty as accepting the value and legitimacy of online education. This number reflected a decrease from the previous two years and the lowest point since 2005. That level of acceptance ranged from a low of 27.6% in 2002 to a high of 33.5% in 2007. The percentage of faculty reported as accepting the value and legitimacy of online education varied between institutions with and without online offerings, but even those institutions with one or more fully online programs reported that only 38.4% of their faculty accepted this mode of delivery as valuable and legitimate. A direct survey of faculty ($n = 2,251$) confirmed these results, with only 21% of faculty respondents indicating that they agreed or strongly agreed that online courses "can result in learning outcomes that are at least equivalent to face-to-face courses," compared with 59% of administrators ($n=248$), who agreed or strongly agreed with the same statement (Jaschik & Lederman, 2013). These results highlight the disconnect between faculty and administrators' attitudes toward online learning. This gap in acceptance of online

education, coupled with the current trend in higher education toward a more corporate approach to decision-making as a strategy for reacting to increased demands and decreased funding (Slaughter & Rhoades, 2004), may have serious implications for sustaining faculty control over the development and delivery of instruction and related policies. A 2013 survey by the Instructional Technology Council (ITC) identified engaging faculty in online pedagogy as the top challenge reported by educational administrators (Lokken & Mullins, 2014). If faculty will not engage in online learning processes, they may unintentionally or otherwise cede control of the instructional function to administrators, which could ultimately negatively affect the quality of instruction available to students.

Impact on Faculty Role

The rapid growth of Internet-based educational delivery models has impacted the traditional faculty role in instructional delivery. In *Faculty 2.0* (2007), Hartman, Dziuban, and Brophy-Ellison asserted that traditional faculty teaching and research roles have been substantially impacted by technology and that technology-driven changes in the teaching and learning space propel faculty from a teaching-centered to a learning-centered approach. In a learning-centered approach, the primary role of faculty changes from that of discipline expert/information disseminator to that of learning environment designer, and the learning environment extends far beyond the traditional 50-minute class period. The shift to a "Learning Paradigm," first proposed by Barr and Tagg (1995) 20 years ago as a means of improving educational outcomes, called for institutions to change the focus from instruction to learning. Online learning environments facilitate increased interaction between and among faculty and students, accelerating that paradigm shift. The focal shift from instruction to learning has had a significant impact on the traditional faculty role as

provider of information (Mitchell & Geva-May, 2009; Schifter, 2000; Wolcott, 2004).

The changes go beyond instructional style and imply a shift in the balance of power relationship between faculty and students for two reasons. The first is the diffusion of sources of information; no longer are faculty lectures and the textbook the primary sources of information about a topic. Instead, the Internet and open educational resources provide access to a vast array of information. The second is that students are often more familiar with the technologies used to deliver online learning than are their instructors, which can be an uncomfortable place for faculty and which may necessitate an increased reliance on professional staff to perform basic job functions. In addition to shifts in the balance of power, technological changes and student expectations also alter the way that faculty spend their time. Email and learning management systems have become ubiquitous while student expectations for faculty availability have increased. Faculty have reported spending greater amounts of time responding to students and that time is spread over a longer period of the day (Hartman, Dziuban, & Brophy-Ellison, 2007).

Another impact of distance learning on the faculty instructional role is what has been called "unbundling." Unbundling refers to the disaggregation and redistribution of faculty activities related to teaching in an effort to reduce instructional costs. These instructional activities include material preparation, content presentation, assessment of student learning, and interaction with students about course content (Schuster & Finkelstein, 2006). On many campuses, technology-based models designed to increase access and degree production employ methods in which the faculty member has a lesser role in course development and delivery. These models include master course design, increased reliance on adjunct faculty, the use of learning coaches in place of instructional faculty, individualized computer-aided instruction, and competency-based credit (Hill,

2012; Howell & Meyer, 2009; Otte & Benke, 2006; Twigg, 2005). The number of non-faculty professionals working in distance learning and media centers is growing, and the professionals in these roles are assuming greater responsibility for designing course platforms and formats, learning activities, and student assessment. The proportion of full-time faculty in the campus professional workforce has fallen to less than half over the past 20 years, and the number of non-administrative professionals has been steadily increasing (Ginsberg, 2011; Slaughter & Rhoades, 2004). In an environment in which non-faculty professional jobs are growing at a greater rate than full-time faculty jobs, and those new professionals are assuming an increased responsibility for the design and delivery of instruction, it is understandable that faculty often cite concerns about their role and job security as sources of resistance to online teaching (Mitchell & Geva-May, 2009; Wolcott, 2003).

In addition to the impact on faculty instructional role, growth of Internet-based educational delivery models can bring change to the faculty role in curriculum and policy decision-making. Faculty have traditionally been responsible for the quality and control of instruction at institutions of higher education. The advent of online education and shifts in shared governance impact those responsibilities. The trend of administrative and professional staff growing at a greater rate than faculty positions, as noted by Ginsberg in *Fall of the Faculty* (2011), not only increases the cost of higher education for students and their faculty, but more dangerously can weaken the faculty role in instructional and curricular decision-making and policy matters.

Slaughter and Rhoades (2004) asserted that public institutions of higher learning have adopted new patterns of behavior they term *academic capitalism* in response to loss of state support. These patterns of behavior include activities aimed at generating revenue

from traditional educational and research functions, and prioritizing revenue generation

over fundamental educational activities of the academy. The 1966 Statement on

Government of Colleges and Universities from the American Association of University

Professors (AAUP) defines the faculty role in governance: "The faculty has primary

responsibility for such fundamental areas as curriculum, subject matter and methods of

instruction, research, faculty status, and those aspects of student life which relate to the

educational process" (p. 139). This traditional role of responsibility for curricular

decision-making and policy is being eroded by the academic capitalism approach, which

is often a driver for the growth of distance learning on college campuses. Changes in the

system have been manifold:

> Academic capitalism in the new economy involves academic managers arrogating
>
> more control over the curriculum. And one mechanism for legitimating, and at the
>
> same time exercising, that control is to prioritize budgetary, economic and
>
> strategic issues in the processes that surround building, investing in, restructuring
>
> and de-investing in academic programs. (Rhoades & Slaughter, 2004, p. 50)

The encroachment on faculty governance implicit in the academic capitalism approach

described by Rhodes and Slaughter marginalizes the role of faculty not only in the

delivery of instruction, but also in curriculum and program development.

An additional source of stress for faculty related to these changes is that although

teaching is an important piece of the complex role faculty have in institutions of higher

education (Bess, 1996), it is often not the role for which faculty receive primary

recognition and reward (Blackburn & Lawrence, 1995). The promotion and tenure

process remains focused on the production of scholarly work published in peer-refereed

journals and, although good teaching is expected, it is typically not given the same weight

as research in promotion and tenure decisions (Boyer, 1997). Developing distance

learning courses requires considerable time and effort. A lack of recognition for these

efforts in the promotion and tenure process has been noted by faculty as a barrier to

participation in online teaching (Maguire, 2005; Schifter, 2000; Simpson, 2010).

Governance

Kezar and Eckel's (2004) review of governance challenges in higher education

identified three significant changes making governance more problematic in the new age

of alternative instructional delivery: (a) the need for higher education institutions to

respond to varied and complex environmental issues; (b) weak mechanisms for faculty

participation in governance; and (c) the need for higher education institutions to respond

more quickly to these challenges. The need for higher education institutions to respond

more quickly to challenges is exacerbated by what Cohen and March (1986) have called

"fluid participation" in organizational life by faculty members in their description of

universities as "organized anarchies." Fluid participation suggests that faculty

involvement varies widely over time based on other competing interests, the low salience

of most issues, and high inertia (Cohen & March, 1986). Birnbaum (2004) stressed the

interrelationship between governance and institutional purpose and called for great

caution in efforts to make governance more efficient by diminishing the faculty role. He

argued that any attempt to streamline governance and policy-making by removing faculty

from the process not only alienates faculty, but also ultimately reduces institutional

effectiveness and alters the core mission of academic institutions. In the current context

of the growth of online instructional models as a means of meeting the national goal of

increasing degree production, and the trend toward development of distance learning

policy and quality assessment measures being assigned primarily to professional support

staff and administrators, these cautions are of paramount importance. The perils of minimizing the faculty role in the development of institutional goals and policy related to distance learning is seen in research that identifies faculty concerns about loss of autonomy and control as barriers to participation in online teaching (Dillon & Walsh, 1993; Labach, 2011; Maguire, 2005; Mitchell & Geva-May, 2009; Muilenburg & Berge, 2001; Schneckenberg, 2009; Wolcott, 2003).

A thorough understanding of faculty and administrative perceptions of online education in general, and more particularly, of the faculty role in distance learning policy-making, is necessary to inform the issue of faculty role in the quality and control of instruction. Maguire's 2009 study of distance learning policy-making was motivated by an observed exclusion of faculty in the distance learning policy decision-making process and an absence in the literature about the faculty role in that process. Maguire's work focused on the perceptions of faculty at public, four-year institutions of (a) their role in the creation of distance learning policies, (b) the impact of those policies, and (c) the nature of faculty involvement in the policy-making process. Two important findings of Maguire's study were that faculty were interested in being more involved in the development of distance learning policy and they believed that institutional policy impacted the quality of distance learning offerings. Maguire also found that specific institutional factors, including campus culture, power and politics, and campus structures, impact faculty involvement and affect policy development. Politics at both the state and institutional level played a role in faculty's perception that their involvement in the process was perfunctory, or even futile. The study found that faculty want a greater role, but do not want to be the only stakeholders involved. In fact, some faculty cited the need for increased student participation in policy-making in this area.

Other studies have reported that faculty have a high level of concern not only about their role, but also about the impact that the growth of online learning will have on their institution and its role and reputation (Mitchell & Geva-May, 2009; Simpson, 2010). Maguire (2009) reported that faculty can impact policy development by communicating about their experiences related to online teaching, and that faculty involvement in the conversations on campus about distance learning related policies promoted a greater sense of ownership in online programs and enthusiasm for that teaching methodology among faculty. Maguire recommended that administrators consider campus culture, history, and issues of power and politics while also promoting faculty involvement and giving faculty, adjuncts, and students a voice in the policy-making process.

As institutions move more purposefully into online delivery of courses and programs, a greater understanding of the faculty role in governance over curricular and instructional matters is needed. This includes exploration of the degree to which this traditional role has already been transitioned to professional administrators and distance learning support staff at public institutions with widely implemented online instructional models and the implications of that transition. The disaggregation and reorganization of the faculty role compelled by a shift to a learner-centered paradigm, the advance of academic capitalism, and the growth of distance learning disrupt institutionalized practices of educational delivery, and the ways in which these changes are enacted vary by institution.

Organizational context shapes the behavior of individuals within organizations and thus institutional factors must be carefully examined in order to understand the unique behaviors of individuals (Cappelli & Sherer, 1991). The organizational context factors under consideration in the present study are institutional in nature and include

structural characteristics, organizational culture, support mechanisms, reward systems, and climate factors. These are collectively referred to as institutional context. The impact of institutional context on faculty decisions to participate in online teaching is poorly understood, yet the development of successful distance learning programs at any institution is dependent on the participation of its best faculty (Wolcott, 2003).

Organizational Theory

Research related to organizational culture in higher education was utilized as the conceptual framework for understanding the influence of organizational context within the present study. Consideration of organizational culture is essential for any change process, such as the growth of distance learning and its acceptance as a legitimate educational model by faculty. The discussion of organizational culture here, as linked to change theory, establishes a foundation for understanding how change processes are enacted by individuals and by organizations. Organizations can be understood as complex systems of individuals and coalitions competing for scarce resources (Bolman & Deal, 2008). Classic organizational theorists conceived of organizations as rational and responsive to changes in the environment, but later theorists challenged the idea that organizations behave rationally and instead proposed that organizations are more socially constructed and create their own environments deliberately (Shafritz, Ott, & Jang, 2011). One example from these later theorists is institutional theory, which asserts that the organizational environment influences both the formal structures and processes of the organization more strongly than outside market demands. These structures and processes become institutionalized as "the authoritative guidelines for social behavior" (Scott, 2005, p. 460) and persist as ideals whether or not they are effective in achieving the organization's goals. Institutions of higher education are particularly prone to this

institutionalist perspective in establishing social and cultural norms. Thus, organizational change theorists have described higher education organizations as "loosely coupled systems," or "organizational anarchies" (Cohen, March, & Olsen, 1972; Weick, 1976) in an effort to characterize their non-rational resistance to change.

Classroom teaching and the role of faculty as dispenser of knowledge is one such historically valued and institutionalized practice that accounts for faculty resistance to distance learning (Jaffee, 1998). More recent work on the institutionalist perspective asserts that new competition, calls for accountability, and the prominence of the role of education in a knowledge society present new institutional realities for higher education and have forced institutions to become more market-minded and entrepreneurial (Meyer & Rowan, 2006; Slaughter & Rhoades, 2004). In this environment, cultures clash and entrenched political coalitions may act to delay or prevent change (Meyer & Rowan, 2006).

Organizational Culture

Organization culture can be described as the artifacts, behaviors, espoused values, and assumptions of an institution (Schein, 1992), or simply "the way things get done around here" (Deal & Kennedy, 1982). Organizational culture is not a singular paradigm, even for a specific institution. There are characteristics unique to higher education institutions, to particular institutions, and to particular groups or units within an institution. Cohen, March, and Olsen (1972) characterized institutions of higher education as having problematic goals, ambiguous processes, and fluid participation. Higher education has the curious condition of being simultaneously highly inert and highly reactive. The position and role of faculty present another unique characteristic of higher education organizations. In many ways, faculty are the very essence and value of a

university, and tension between faculty and administration about goals and how to achieve them acts as a barrier to change. On the other hand, although faculty participate fluidly in organizational decision-making, the power of faculty governance has been steadily eroding over the past 30 years (Bess, 2006; Ginsberg, 2011; Kezar & Lester, 2011; Slaughter & Rhoades, 2004). Change initiatives – particularly curricular or instructional change initiatives that do not have buy-in and active support from the faculty as a whole – are unlikely to be successful or sustainable. Departmental siloes and hierarchical structures hamper pedagogical change and make broader change initiatives more difficult to institute (Merton, Froyd, Clark, & Richardson, 2009).

An understanding of organizational culture in higher education requires consideration not only of macro-level organizational culture characteristics, but also delving into an organization's sub-cultures. Beyer (1996) noted that the unique history and mission of universities and colleges make culture behave differently there than in other organizations, resulting in what she termed "differentiated cultures." She asserted that these subcultures in higher education have a strong influence on faculty motivation toward teaching. Faculty belong simultaneously to a number of subcultures in their professional lives, and each exerts an influence on motivation and behavior. The strength and influence of the organization-level culture varies across institutions (Tierney, 1988). Sub-cultures within higher education institutions are formed as the result of social interaction, shared experiences, social cohesion, and similar personal characteristics (Beyer, 1997).

Two particular subcultures of interest for the purposes of the present study are those related to role and discipline. Faculty, students, and administrators each have specialized characteristics and expectations within an institution and are, in essence,

engaged in different occupations. Each group has a distinct value system, which can cause cultural conflict (Beyer, 1997). Faculty and administrators in particular, operate from differing sets of values, with administrators more often concerned with efficiency and faculty more concerned with scholarship (Kezar, 2001). Each group is also concerned with controlling how the university operates (Beyer, 1997), whether that interest is in maintaining the status quo, or in responding to dynamic environmental conditions. In addition to the influence of general role subcultures, academic disciplines within and across institutions have notoriously divergent subcultures, characterized as *Academic Tribes and Territories* by Becher (1994), with distinct shared values, norms, customs, and practices. Reward and recognition structures in higher education often align with individual faculty effort, particularly publishing (Kezar, 2001, 2006). Because discipline-area peers control publication in the journals of the discipline, the strong influence of the academic tribe and its norms becomes easily understandable. Becher noted that although universities possess a distinct culture which acts to coordinate these hostile tribes, most faculty identify more closely with their discipline than their institution. The absence of strong cultural leadership on campuses strengthens these subcultures (Beyer, 1997). Previous research on faculty participation in online teaching found significant association between academic discipline and attitudes toward distance learning (Graham & Jones, 2011; Shea, Pickett, & Li, 2005; Simpson, 2010).

Change that is rationally conceived at the top often fails (Bolman & Deal, 2008), but leaders can be more successful in facilitating change when they understand and leverage the culture in which they are working (Schein, 1992). In a study of higher education organizational change processes, Kezar and Eckel (2002) found that successful change strategies were aligned with campus culture and that when strategies were counter

to organizational norms, change was unlikely to occur. Tierney (1988) provided a framework for understanding organizational culture in the context of higher education and identified ways in which administrators can use culture to address administrative problems and facilitate change.

Tierney (1988) noted, "People come to believe in their institution by the ways they interact and communicate with one another" (p. 16). Using case study methodology, Tierney found that one institution was successful in facing challenges because its leadership was clear in articulating the vision for the institution and in tying concepts of the institution's vision to its mission. The president made himself available to students and employees and valued open dialogue; his actions matched his espoused values. Information flowed freely within the college and to the surrounding community. The administration engaged in widespread discussion and dialogue before utilizing the formal decision-making processes. These types of leadership behaviors would not be successful at all institutions, but worked in this case because the leadership matched the existing culture at that organization. Often, administrators do not recognize organizational culture until they clash with it and are "in an atmosphere of crisis management, instead of reasoned reflection and consensual change" (Tierney, 1988, p. 4).

Kezar and Eckel (2002) used Tierney's work on institutional culture as the framework for their study of change in higher education. The researchers observed change processes for large-scale initiatives across six institutions. These initiatives entailed comprehensive changes that were intentional, occurred over time, and had effects across campus, impacting values, beliefs, and structures. Five core strategies for enacting change were identified: senior administrative support, collaborative leadership, robust design, staff development, and visible actions. Results identified a relationship

between institutional culture and the relative success of change efforts at every institution. Individual institutions enacted the same strategies in different ways, dependent on their culture and institutional archetype. In instances where the strategies violated cultural norms, the desired change did not occur. However, archetype alone did not explain differences in change process, and the researchers cited this as an important reason to examine institutional culture in depth before undertaking major change. Kezar and Eckel (2002) also suggested that in some situations enacting change might require violation of cultural norms and confrontation of institutional culture. The challenge of delivering instruction in a world that is increasingly shaped by technology may represent that kind of change (Bruininks, Keeney, & Thorp, 2010; Hirschman & Hrabowski, 2011; Mehaffy, 2010).

Change Theory

Heifetz, Grashow, and Linksy (2009) proposed that the challenges faced by organizations can be characterized as either technical or adaptive. Technical challenges are those for which solutions already exist and can be applied fairly readily to resolve problems. These challenges may be complex and convoluted, but can be overcome using current know-how. The locus of work in identifying and resolving a challenge is authority; management can typically overcome technical challenges. Adaptive challenges are those for which a solution is not readily apparent and for which involvement from stakeholders is essential for identifying and implementing potential solutions. Learning is required for the organization and the individuals that comprise it. Adaptive challenges can only be addressed through changes in people's priorities, beliefs, habits, and loyalties. Resolutions to adaptive challenges require going beyond authoritative expertise to mobilize discovery, shed entrenched ways, tolerate losses, and generate new capacity

to thrive. The locus of work for adaptive challenges requires leadership to harness the collective wisdom and energy of a group to correctly diagnose and respond to these challenges. Fear of change (and its effects on oneself, one's professional identity, the institution, and higher education as an institution), is often cited by as a reason for non-participation in distance learning by faculty (Labach, 2011; Maguire, 2005; Mitchell & Geva-May, 2009; Parthasarathy & Smith, 2009; Wolcott, 2003). The successful growth of new instructional models, including distance learning, that respond to environmental pressures in ways that do not erode the value and legitimacy of public institutions of higher education, is an adaptive challenge that will require the full participation of faculty in the process.

Change in Higher Education

Kezar (2006) studied four higher education institutions with high levels of collaborative activities and identified eight characteristics that facilitate and support change in higher education: (a) true alignment between mission and philosophy, with collaboration explicit in the mission and practices of the organization; (b) the presence of campus networks through formal and informal structures; (c) an integrating structure, usually a center established specifically to foster collaboration; (d) a reward structure aligned to value collaboration, including the weighting of collaboration in the promotion and tenure process; (e) a sense of priority from top leadership, with modeling of desired behaviors; (f) external pressure (from accrediting bodies and granting foundations) to collaborate that is integrated into campus communication streams; (g) student-centered, innovative, and egalitarian values as part of the campus culture; and (h) opportunities for learning, both formal and informal. These characteristics overlap with those found in business models for developing collaborative models. Differences , which appear to be

specific to higher education, include increased importance of leadership, relationships, networks, and the creation of an institutional narrative that supports collaboration. This set of characteristics identified by Kezar can be used as a beginning point for analysis by institutions wishing to reexamine their current structure and practices when embarking on change initiatives.

Other research echoes the importance of organizational culture in change strategy. In a study of curricular change in an engineering program, researchers found that the efficacy of change strategies was dependent upon the initiative's alignment with organizational culture (Merton, Froyd, Clark, & Richardson, 2009). The study noted that leaders of change efforts "must be able to identify the core elements of their culture and how different elements might promote or hinder particular changes being contemplated" (Merton et al., 2009, p. 222) to be successful. Another study of the successful large-scale implementation of technology into the curriculum at the community college level found that transformational change required the reconsideration and revision of institutional assumptions through participative decision-making, which resulted in new norms and practices (Owen & Demb, 2004).

Interestingly, the decision-making and information-sharing structures of higher education institutions are typically hierarchical and do not encourage collaborative efforts typical of "learning organizations." Senge (2006) defined a learning organization as one in which "people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together" (p. 3). He called for organizations to engage in *systems thinking*, consideration of the whole rather than the individual parts, in order to address complexity and avoid failures caused by the

inability to unite the diverse roles and abilities of an organization into a cohesive whole. Systems thinking incorporates shared vision, defined as "a sense of commonality that permeates the organization and gives coherence to diverse activities … [providing] the energy and focus for learning" (Senge, 2006, p. 192).

Higher education has traditionally been organized around silos of expertise, rather than the collective wisdom of the group (Mehaffy, 2010). Decisions are often "made locally, in the best interests of an academic department or research program, instead of the institution" (Bruininks, Keeney, & Thorp, 2010, p. 122). Reward and recognition structures in higher education typically align with individual, not collective effort (Kezar, 2001, 2006; Owen & Demb, 2004), which reinforces the focus on individual interest. Contrary to this structure, groups comprised of diverse individuals can often make superior decisions by harnessing the benefit of the collective wisdom, creativity, memory, diversity, and problem-solving abilities of all of its members (Levi, 2004). Hence, it higher education institutions would benefit from the transition to an organizational culture in which "expertise [is] treated (and rewarded) as a collective, not a singular, phenomenon" (Mehaffy, 2010) in order to effect the change needed to meet current challenges. Reconsideration of current hierarchical structures may be necessary for institutions of higher education to become learning organizations with a strong collective purpose. Institutions that aspire to become learning organizations must create a culture in which leadership is distributed throughout to foster continual learning and continual change (Senge, 2006).

Leadership and Change

Distributed leadership models offer the potential to inform and support collective change in organizations. Existing leadership models are based on theories developed in

the Industrial Era and are not adequate for knowledge-based organizations operating in today's complex and dynamic environment (Cooksey, 2003; Ford, 2010; Harris, 2008; Uhl-Bien, Marion, & McKelvey, 2007). Distributed leadership provides a lens for viewing organizational activity through the interactions of leaders and followers within their unique context. It does not obviate recognized leadership roles, but places greater emphasis on lateral processes and the intersection of vertical and horizontal structures (Harris, 2008; Spillane, Halverson, & Diamond, 2001). Owen and Demb (2004) cited the use of "champions" as an effective method for distributing leadership during change initiatives. In higher education settings, these initiative champions can be the faculty members who are early adopters of a new method or technology when supported properly. Champions then serve as models, share what they have learned at events, become resources for other faculty, and become informal leaders of the new initiatives through campus networks.

Wilson (2010) used the metaphor of building bridges to describe leadership strategies that enable collective change. Scholars have noted that crafting an organizational narrative builds an emotional bridge to combat the uncomfortable human emotions often associated with change and allows people to participate in a collective story. Relational bridges spread change through existing social networks that provide multiple exposures to, and reinforcement of, complex new ideas. In addition to these top-down and bottom-up strategies, structural bridges provide an avenue to spread change through mid-level associations, including committees, employee associations, and communities of interest. The leadership behaviors identified by Wilson align with the characteristics of collaborative institutions laid out by Kezar (2006). These strategies provide a method by which positional leaders can avoid pitfalls and move toward a

culture supportive of change. The recurrence of the words *open*, *shared*, *articulated*, *aligned*, *collective*, *diverse*, and *networks* in the literature about successful change point clearly to the types of strategies that should be the focus of efforts by leaders and organizations desirous of meeting adaptive challenges.

Historically, efforts to redesign and improve undergraduate education without reorganizing the surrounding structures often fail (Bruininks, Keeney, & Thorp, 2010; Kezar, 2006). In order to meet these challenges successfully, institutions must move from current models that emphasize individual work and expertise to models that that harness the wisdom of the group and put emphasis on collaboration (Kezar, 2006; Mehaffy, 2010; Uhl-Bien, Marion, & McKelvey, 2007). Kezar (2006) emphasized the importance of developing relationships and networks in higher education institutions early in the change process as one of the key factors in a successful shift to organizing for collaboration. Failures not only to adapt to the current environment, but also to become adaptive organizations, working together within and between institutions, may mean widespread failure.

> If we try to react in the present tense, we will constantly waver and never catch up, let alone win. We must anticipate the future and act accordingly, with flexibility and urgency. For too long, the prevailing notion in higher education has been "this too shall pass." And that may be the deadest idea[1] of all. (Bruininks et al., 2010, p. 124)

Complex problems, increasing demands, and a dynamic climate demand serious reconsideration of the current organizational models and leadership structures in higher

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[1] Reference to Matt Miller's (2009) *Tyranny of Dead Ideas*

education. Meeting these challenges will likely require substantial change in the way that we organize, operate, and interact, both within and between institutions, and a strengthening, rather than a weakening of the faculty role in these change efforts.

Innovation Theory

Rogers' (2003) diffusion of innovation theory provides a lens for consideration of a particular type of change: how and why new technologies are adopted through a social system. Diffusion research is concerned with how innovations are adopted and why some innovations are adopted at different rates than others. Individuals are motivated to reduce uncertainty about the relative advantages and disadvantages of adopting a new technology by moving thorough information seeking and information processing activities. In Rogers' model, diffusion is the process by which an innovation spreads through a social system and is considered a special type of communication. Adoption rate is influenced by multiple phenomena: characteristics of the innovation, communication channels, time, and the social system in which the innovation is operating.

An individual's decision to adopt an innovation is a process that occurs over time. The innovation-decision process is defined as "the process through which an individual (or other decision-making unit) passes from first knowledge of an innovation, to forming an attitude toward the innovation, to a decision to adopt or reject, to implementation of the new idea, and to confirmation of this decision" (Rogers, 2003, p. 168). Communication channels move messages among members of a social system and may take different forms. Mass communication channels are more effective for spreading information about innovations, but interpersonal channels are more effective in shaping attitudes toward an innovation and influencing the decision to adopt or reject. Rogers (2003) defined interpersonal channels as face-to-face exchanges between two or more

people. He argued that diffusion of innovation is a social process in which information about a new idea is communicated between members of a social network and that the communication is shaped by the subjective evaluation of the innovation by each member. Rogers' concept of interpersonal channels is consistent with the idea of faculty champions and informal networks found to be effective by other scholars of change in higher education (Cooksey, 2003; Kezar, 2006; Owen & Demb, 2004; Wilson, 2010). The way in which individual members of a social system perceive particular characteristics of the innovation is influential in both their own decision to adopt and in the way they influence others decisions. Not all individuals influence others equally, and Rogers (2003) termed those who are influential in spreading positive or negative information about an innovation as "opinion leaders." Opinion leaders in a network become so not by formal status, but by technical competence, social accessibility, and conformity to system norms.

Adoption rates for an innovation follow an S-curve representing the cumulative number of adopters over time, with a slow rise, sharp acceleration, then slow increase as adoption becomes saturated as shown in Figure 2. Rogers (2003) characterized adopters as falling into five categories: innovators, early adopters, early majority, late majority, and laggards. Adopter distributions tend to approximate a normal distribution over time, with 68% of individuals falling into the early and late majority categories. Early adopters tend to have greater self-efficacy and a more favorable attitude toward change. Those in the early majority tend to have a longer deliberation period before adopting a new idea and interact frequently with peers but are seldom opinion leaders in their group. Late majority adopters tend to be highly skeptical and do not adopt an innovation until they feel peer pressure and believe that system norms now favor the innovation (Rogers,

2003). Each category of adopters operates on the basis of different motivations and requires different kinds of support and professional development. Further, later stages of adoption of an innovation involve larger populations, implying an increase in the scale of support (Hartman, Dziuban, & Brophy-Ellison, 2007).
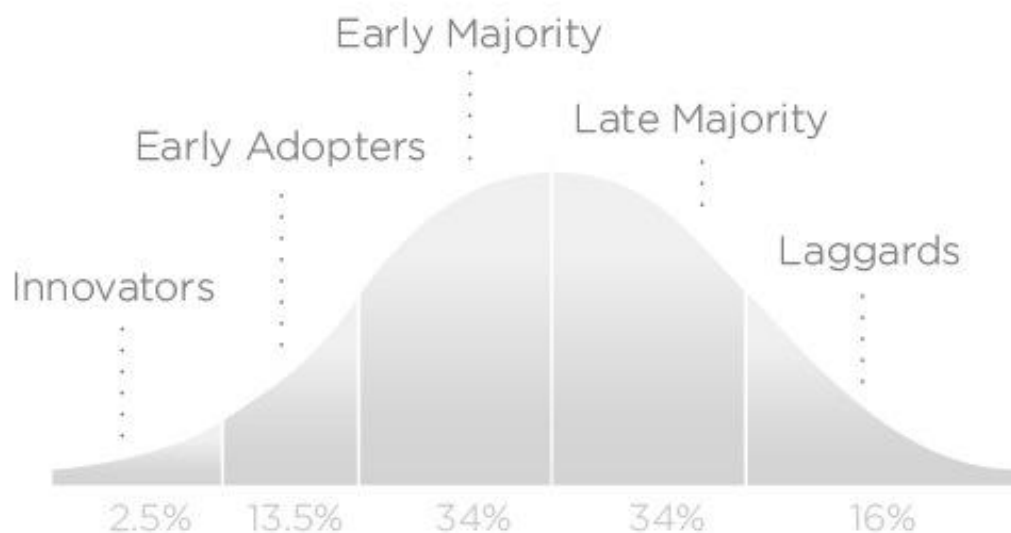
Figure 2. Rogers Technology Adoption Lifecycle Model. Pnautilus (2011). Licensed under Creative Commons Attribution-ShareAlike 3.0 License.

Five perceived attributes of innovations influence adoption: (a) relative advantage, (b) compatibility, (c) complexity, (d) trialability, and (e) observability. Relative advantage is defined as the degree to which an innovation is superior to the idea it supersedes. Compatibility is the degree to which an innovation is consistent with the values, past experiences, and needs of potential adopters. Complexity is the difficulty of understanding and using the innovation. Trialability is the degree to which an innovation can be experimented with on a limited basis. Observability is the degree to which the results of the innovation are visible to others. The perceived relative advantage,

compatibility, trialability, and observability of an innovation by members of a social system are all positively related to its adoption, whereas conversely, the perceived complexity of the innovation by members is negatively related to its adoption (Rogers, 2003).

In studies that used the diffusion of innovation framework to explore questions of faculty attitude toward and participation in distance learning, trialability and observability have been established as positively associated with faculty adoption of distance learning (Northrup, 1997; Shea, Pickett & Li, 2005; Tabata & Johnsrud, 2008). Research by Northrup (1997) using Rogers' (1983) perceived attributes found that trialability was the most important characteristic to faculty considering distance learning. In her study, most faculty believed neither that distance learning had a relative advantage over existing instructional methods nor that it was compatible with their preferred instructional approach. A majority of faculty also reported that they perceived distance learning to be a complex instructional approach and difficult to understand. Tabata and Johnsrud (2008) found that observability, trialability, compatibility and complexity were all positively associated with increased participation in distance learning, whereas relative advantage was significantly associated with a decreased likelihood of participation. The authors suggested that the findings may indicate that as a group, faculty see themselves as innovative and open to new ideas, but due to their professional inclination to gather and evaluate data faculty are also more interested in critically examining new ideas than other groups. This inclination toward critical examination tends to delay faculty's willingness to adopt an innovation even if they find it to offer promising possibilities.

Shea, Pickett, and Li (2005) studied the diffusion of online teaching in a large state system and conceptualized faculty satisfaction as an indication of likelihood to

adopt or continue use of the innovation. They found four variables that were statistically significant in faculty ($n = 913$) satisfaction with online teaching: (a) levels of interaction in online course; (b) technical support; (c) positive learning experiences in developing and teaching course; and (d) discipline area. Two variables were operationalized as relative advantages in adoption of online teaching. A high level of interaction with and between students was seen as a positive aspect of distance learning and significantly influenced faculty decisions to adopt or reject this innovation. Faculty who viewed the process of developing and delivering their online course as a positive personal learning experience also reported greater satisfaction with distance learning and a greater likelihood of continuing to teach online. Faculty satisfaction with the learning management system and available support was linked to mitigating the complexity attribute of an innovation. High levels of faculty satisfaction with those variables correlated with high levels of satisfaction with distance learning and an increased likelihood of continuing its use.

An eight year study of the rate of adoption of web-supported instruction at a large urban university (Soffer, Nachmias, & Ram, 2010) found that adoption patterns performed similarly to Rogers' model when considering the overall population of lecturers ($n = 2,500$), but also found a great deal of variance in adoption rates across academic units. Researchers identified observability of the technology and difference in unit policies toward web-support instruction as factors that accounted for this variance. The role of social systems and network influences on individual adoption patterns of innovations is an understudied area (Rogers, 2003) deserving of additional attention.

Faculty Development

Faculty development has frequently been cited by scholars as an enabler of

change processes in higher education (Furco & Moely, 2012; Kezar & Eckel, 2002; McQuiggan, 2012; Sherer, Shea, & Kristensen, 2003). A classic definition of faculty development is "a process which seeks to modify the attitudes, skills, and behavior of faculty members toward greater competence and effectiveness in meeting student needs, their own needs, and the needs of the institution" (Francis, 1975, p. 720). The genesis of the modern faculty development program came from the reconsideration of the traditional scholarship-focused faculty role in the 1960s and 1970s, and the resulting calls for more attention to teaching in higher education. The establishment of a national association devoted to these efforts, the Professional and Organizational Development Network in Higher Education (POD) occurred in 1972, and faculty development centers began to appear on campuses as formal units with full-time staffs, budgets, and regular activities designed to promote faculty growth (Gillepsie & Roberstson, 2010). Faculty development can support change by providing structured activities and peer-networking opportunities that enable faculty participants to better understand innovations, develop competencies, explore the value of innovations for personal and student growth, connect with colleagues with shared curiosity or interest, and gain a better understanding of institutional support (Furco & Moely, 2012; Sherer, Shea, & Kristensen, 2003).

The need for faculty development related to online teaching is growing and has been cited as a critical factor for the success of distance learning initiatives (Howell, Saba, Lindsay, & Williams, 2004; Lee, 2001; Meyer, 2014). The change to instructional role, noted earlier, means that faculty must not only master new technology tools, but also develop expertise in the design of web-based interactive courses and the facilitation of student-centered interactive instructional activities (Howell et al., 2004). A focus on instructional support is a critical component of faculty development for online teaching in

order to master these instructional strategies (Northrup, 1997; Schifter, 2000). Lee (2001) asserted that "faculty motivation, commitment, and satisfaction on distance teaching may be in proportion to instructional support they receive" (p. 158). Participation in faculty development activities such as training on the use of online teaching tools, course redesign workshops, and learning communities focused on online teaching, support the trialability and observability attributes noted earlier as being positively related to faculty participation in online teaching (Northrup, 1997; Shea, Pickett, & Li, 2005; Tabata & Johnsrud, 2008).

Motivation Theory

As noted by Ryan and Deci (2000), "motivation is perhaps the critical variable in producing maintained change" (p. 76). Therefore, a clear understanding of human motivation helps to inform understanding of faculty motivation toward online teaching, and can assist in analyzing variance. Early research on motivation focused on the effect of external reinforcement to increase or decrease the probability of behaviors. Reinforcement theory posited that behavior is a function of individual experience with a particular behavior and whether that particular behavior has been rewarded or punished in the past (Stipek, 1996). In this framework, behavior is shaped by consequences. The frequency of a behavior is increased by reinforcers and decreased by punishments. Individuals engage in behaviors that have pleasant outcomes and avoid behaviors with unpleasant outcomes. The important consequence of a behavior is the information it provides to inform future behaviors. As Stipek noted, the use of punishment and rewards is limited in effectiveness and the benefits tend to diminish over time. Therefore, researchers later turned to theories that linked behavior to cognition.

Cognitive Theories

Cognitive motivation theorists acknowledged the role of rewards but added that expectations and values affect the ability of rewards to induce a behavior. Self-efficacy theory, one cognitive motivation model, posits that efficacy is the major determinant of effort, persistence, and goal setting. Self-efficacy is defined as people's beliefs about their perceived capabilities to attain designated types of performances and achieve specific results. Self-efficacy beliefs determine "how people feel, think, motivate themselves and behave" (Bandura, 1997, p. 116). Bandura (1982) asserted that people avoid activities that they believe are beyond their capabilities, but willingly engage in and perform well in activities for which they believe they have capacity. Individual judgment of self-efficacy determines the amount of effort individuals will expend and how long they will persist when faced with difficulties in performing a task. Belief in ability influences motivation toward an activity (Bandura, 1997). This principle can be seen in research on faculty participation in distance learning and underscores the important role of faculty development in promoting participation in online teaching. Several faculty research studies reported that increased self-efficacy toward online tools and learning strategies resulted in increased adoption of distance learning (Aijan & Hartshorne, 2008; Buchanan, Sainter, & Saunders, 2013; Schneckenberg, 2009; Tabata & Johnsrud, 2008).

Expectancy Theory

An expectancy theory of motivation, personal investment theory (Maehr, 1984), evolved from research on the role of social and cultural context on motivation patterns. Maehr theorized that the personal meaning of a situation determines behavior and continued motivation, and that sociocultural factors play a major role in determining task meaning and the creation of personal investment. Particularly, an individual's social-cultural group determines whether or not it is acceptable or valued to perform in a certain

area. Personal investment theory assumes that conscious thoughts are critical in determining behavior and that individuals constantly make decisions about how to invest time and effort. Maehr conceived motivation as personal investment. Personal meaning is influenced by personal beliefs, situational factors, and organizational context. The personal meaning an individual constructs about an activity influences investment in an activity. Thus, personal investment theory's consideration of socio-cultural group acceptance, i.e. academic "tribes and territories" (Beyer, 1997), may explain the previous research on faculty participation in online teaching, which found statistically significant association between academic discipline and attitudes toward distance learning (Graham & Jones, 2011; Shea, Pickett, & Li, 2005; Simpson, 2010).

Intrinsic Motivation

Motivation theories that focus on competence, expectancy, and control beliefs are useful in understanding human performance, but do not satisfactorily explain all of the reasons that individuals may have for engaging in activities (Eccles & Wigfield, 2002). Intrinsic motivation theories focus on participation in an activity based on interest and enjoyment. These theories assume that there is an inherent human drive to develop competencies and to gain pleasure from accomplishments. Therefore, individuals decline to engage in a behavior not only when they expect to fail, but also if they do not expect to enjoy the work or find it incongruent with their values (Stipek, 1996).

Ryan and Deci (2000) asserted that individuals who are intrinsically motivated have increased interest, excitement, and confidence; which in turn leads to enhanced performance, persistence, and creativity. This holds true when compared to extrinsically motivated individuals with the same levels of self-efficacy. Self-determination theory (Ryan & Deci, 2000) states that the need for competence, autonomy, and relatedness are

universal human characteristics and that activities have greater intrinsic value when individuals believe themselves, rather than some external force, to be the locus of control. Ryan and Deci further asserted that an emphasis on extrinsic rewards stifles creativity and cognitive flexibility. Some studies on faculty participation in distance learning have found that faculty are not motivated by financial rewards and, in fact, that the use of financial incentives can discourage participation (Gannon-Cook, Ley, Crawford, & Warner, 2009; Schifter, 2000, 2005; Stipek, 1996; Tabata & Johnsrud, 2008; Wolcott & Betts, 1999). In a study of motivation in work organizations, Deci, Connell, and Ryan (1989) defined self-determination as "experiencing a sense of choice in initiating and regulating one's own actions" (p. 580), and found that support for autonomy, non-controlling positive feedback, and acknowledgement of others' perspectives promoted individual feelings of self-determination. In other words, self-determination has a positive impact on motivation.

The interpreted meaning of any input affecting the initiation and regulation of intentional behavior can be defined as informational or controlling (Deci, Connell, & Ryan, 1989). Informational inputs support autonomy and promote confidence. Controlling inputs pressure one to think, feel, or believe in specific ways. Deci et al. concluded that informational inputs foster self-determination, controlling inputs diminish self-determination, and the experience of self-determination, when promoted in a work environment, has positive ramifications for work life. When considered with reward theory, Deci and Ryan (1985) found that the interpersonal environment in which performance-based rewards are given might affect whether they are perceived as controlling or informational. The traditionally high expectation of autonomy in work life by faculty, in combination with the diminishing effects of controlling inputs on

motivation, may help to explain the ineffectiveness of financial rewards in motivating faculty participation in distance learning.

Motivation and Social Context

Autonomy and supports for competence facilitate the internalization of extrinsically motivated behaviors. Ryan and Deci (2000) noted that competence, autonomy, and self-regulation are expressed differently in different cultures and that social contexts have great power to "enhance or hinder the tendency to integrate ambient social values and responsibilities" (p. 76). The role of social context has implications for organizational leaders who want to motivate faculty toward change. The power of context and the ability of socially-valued behaviors to motivate individuals to perform extrinsically motivated behaviors can be seen in reports of faculty choosing to participate in distance learning when that behavior is valued and recognized by their institution (Maguire, 2005; Parsanathy & Smith, 2009; Simpson, 2010). Several theorists have noted that intrinsic and extrinsic motivation theories are neither dichotomous nor do they operate in vacuums (Lepper, Seith, Dialdin, & Drake, 1997; Deci & Ryan, 1985; Stipek, 1996). Although rewards linked to information about competence can promote feelings of competence and self-efficacy and sustain or enhance intrinsic motivation, individuals in cultures that highly value autonomy and individualism, such as higher education, may be most negatively impacted by attempts to control behavior solely by extrinsic reward (Stipek, 1996).

<div align="center">

Faculty Participation in Online Teaching

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The Sloan-C framework for distance learning identifies Faculty Satisfaction as one of five quality principles to guide continuous quality improvement in distance learning development. Faculty satisfaction demonstrates an institutional commitment to

developing and sustaining an environment that is personally and professionally rewarding for faculty teaching online (Moore, 2005). The successful development and delivery of high-quality distance learning courses and programs rely upon faculty participation in, and satisfaction with, that process, so understanding factors that influence faculty decisions to participate in online teaching is critical. Understanding faculty perceptions and motivations can help campus leaders plan for faculty development, support structures, and institutional policies that support faculty and allocate resources aligned with institutional goals. Early research on distance learning focused on effective pedagogical models and impact on learners, while paying scant attention to the importance of faculty in this process (Beaudoin, 1990; Dillon & Walsh, 1992). In recent years, more studies have focused on faculty participation in distance learning; however, relatively few of these studies have emphasized faculty attitudes towards online teaching and specific factors that impact adoption (Maguire, 2009; Mitchell & Geva-May, 2009). The relationship between faculty motivation toward online teaching and factors such as institutional support, institutional climate, faculty involvement in campus decision-making, and reward and recognition structures is poorly understood and ripe for further investigation (Labach, 2011; Schneckenberg, 2009; Wolcott, 2003).

Motivators for Online Teaching

There is strong evidence that intrinsic factors are the primary motivators of faculty interest in teaching online. Research continues to support the findings of Dillon and Walsh's (1997) formative literature review which indicated that faculty are more motivated by intrinsic than extrinsic reasons to teach in distance learning modalities. Intrinsic motivators are those that have an internal origin; the desire to engage in an activity is driven by an interest or enjoyment in the activity itself and by the activity's

congruence with personal values and beliefs. Faculty intrinsic motivators toward online teaching include a personal interest in the technology, intellectual curiosity, opportunity to improve teaching, and interest in developing new ideas (Dillon & Walsh, 1992; Maguire, 2005; Wolcott, 2003).

Schifter (2000) conducted a survey of faculty and administrators ($n = 263$) at a large, urban, Research I state institution in which participants rated a list of 29 factors that had or would motivate faculty to participate in online teaching. The factor list contained intrinsic and extrinsic factors and included such items as monetary incentives, recognition, and release time. Analysis of variance techniques were used to identify significant differences among the motivating factors. "Opportunity to develop new ideas" and "personal motivation to use technology" ranked in the top five responses for both participating and non-participating faculty. The top five factors listed by participating faculty also included interest in improving teaching, diversifying program offerings, and providing greater flexibility for students. Using a similar survey instrument at a regional public university, Beggs (2000) surveyed faculty ($n = 157$) and employed multiple regression techniques to identify motivators most important to faculty. That study reported confirming results, with improved student learning, advantage over traditional teaching, and increased student interest ranking in the top five motivating factors. Ease of use of the technology and availability of equipment were also statistically significant motivating factors reported by faculty.

Gannon-Cook (2003) reported conflicting results with a similar survey instrument given to faculty ($n = 217$) at an urban public university. Her study used principal component analysis (PCA) for data analysis to address potential problems with multicollinearity in earlier studies. The results indicated that extrinsic factors including

monetary rewards, technical support, and prestige were most important to faculty in adopting online teaching. Later, Simpson's 2010 case study of distance learning adoption at a public land grant university reaffirmed earlier research that faulty are primarily motivated to teach online by intrinsic factors. Despite a lack of parity in reward structures for traditional and distance education, faculty reported that they felt intrinsically rewarded by the benefits that online teaching afforded their students, their own involvement in interesting pedagogical discussion about online teaching, a sense of renewal from the intellectual challenges involved, and an appreciation for the scheduling flexibility that online teaching afforded them as faculty. Whether Gannon-Cook's (2003) contradictory findings represent an emerging trend or whether those data were particular to the institution at which the research was conducted remains an open question, and an area for future exploration by researchers. More studies across multiple institutions to identify and measure factors that influence faculty participation in online teaching are needed in order to account for institutional variance.

It is not surprising that intellectual challenge and curiosity have been found to be important motivating factors underlying faculty decisions to participate in online teaching, given their inherent interest in acquiring and disseminating knowledge as a population. It is affirming to note that faculty members also frequently cite concern for students as a motivator for participation in online learning (Lee, 2001; Maguire, 2005; Mitchell & Geva-May, 2009; Parthasarathy & Smith, 2009; Schifter, 2000; Simpson, 2010; Wolcott, 2003). As noted by Bollinger and Wasilic (2009), "the student factor is the most important factor influencing satisfaction of online faculty, which is encouraging because it leads us to believe that many online instructors are student centered" (p. 112). Concern for institution can also motivate faculty to participate in online teaching.

Parthasarathy and Smith (2009) reported what they termed *indirect intrinsic* motivators as significant in predicting adoption of online courses by MBA faculty in the business school of a large public university. They found that when faculty believed their institution would benefit from the development of distance learning, they were more motivated to participate. This finding was confirmed in work done by Orr, Williams, and Pennington (2009) who found that supporting faculty was key to success in developing online initiatives and that "those who teach online want to feel they are adding value to their institutions" (p. 267).

Resistance and Barriers

While the intrinsic desire to engage in activities that are interesting or enjoyable and which are congruent with personal values and beliefs has been demonstrated to be a strong motivator for faculty to participate in online teaching, other intrinsic factors can act as a barrier to participation. Self-determination theory identifies autonomy, competence, and relatedness as basic human psychological needs that, when met, promote a natural propensity for growth and integration (Ryan & Deci, 2000). Logically then, factors that threaten faculty perception of their autonomy, competence, and relatedness may be barriers to growth and to the adoption of new processes. An examination of the literature on barriers to faculty participation in online teaching resulted in the identification of several common areas of concern cited by faculty related to their reluctance to participate in online teaching: apprehension about technology use and new instructional methods (Lee, 2001; Maguire, 2005; Mitchell & Geva-May, 2009; Muilenburg & Berge, 2001; Schifter, 2000); concern about quality of distance learning (Maguire, 2005; Muilenburg & Berge, 2001; Parthasarathy, 2009; Schifter, 2000; Schulte, 2010); threat to the traditional faculty role (Buchanan et al., 2013; Demery,

Brawner, & Serow, 1999; Labach, 2011; Maguire, 2009; Muilenburg & Berge, 2001;

Schifter, 2000); perceived misalignment between distance learning and institutional

mission (Mitchell & Geva-May, 2009; Schneckenberg, 2009; Tabata & Johnsrud, 2008),

and concern about the impact of distance learning on higher education as a system

(Buchanan et al., 2013; Graham & Jones, 2011; Tabata & Johnsrud, 2008). Jaffee (1998)

suggested "the greater the degree to which a particular organizational practice defines and

reinforces one's core professional identity, the greater will be the opposition and

resistance to alternative practices and routines" (p. 23) in his description of

institutionalized resistance to online learning models. For faculty whose professional

identity is strongly tied to the traditional classroom and traditional models of teaching

and learning, the prospect of moving from that traditional classroom to a more interactive

and student-centered virtual environment may conflict with the need for autonomy and

competence.

Intrinsic barriers.

The intrinsic factors reported as barriers in the current literature can be broadly

grouped into two categories: intellectual reluctance and self-efficacy. Intellectual

reluctance as defined by Mitchell and Geva-May (2009) included "perceptions about the

degree to which online learning is consistent with their professional values and norms"

(p. 76). For the purpose of this research study, the category intellectual reluctance will be

expanded to include concerns about quality of distance learning as a pedagogical model,

beliefs about the alignment of distance learning efforts with institutional goals, beliefs

about the impact of distance learning efforts on institutional reputation, and concerns

about the impact of online teaching on the traditional faculty role. These intellectual

reluctance factors can be interpreted as threats to the need for autonomy and relatedness

which are critical to intrinsic motivation in self-determination theory (Ryan & Deci, 2000), because decisions about participation in an activity are predicated on whether an individual believes in their ability to perform a task and their interest in a task, as influenced by social roles and other culturally-based beliefs about the nature and appropriateness of the activity (Wigfield & Eccles, 2000).

In Mitchel and Geva-May's (2009) study of faculty ($n = 382$) at five institutions, factors related to intellectual reluctance included concerns about course quality and the value of distance learning to students and the institution. Findings included higher concern from faculty than administrators about changing roles, that faculty with experience online had fewer concerns about its implementation, and that the most significant concern from both faculty and administrators was about change to the institution based on implementation of distance learning**.** Other research supports intellectual reluctance as an intrinsic barrier to participation in online teaching. Schifter (2000) conducted a survey of faculty ($n = 263$) at a comprehensive public research university asking them to identify factors which motivated or inhibited them to participate in online teaching. The sample included participating and non-participating faculty, as well as administrators. Of the 17 factors available for faculty to choose as inhibiting, concern about quality of courses was ranked in the top five by both faculty groups, and rated more highly by non-participating faculty.

Wolcott (2003) defined barriers as attitudes and perceptions that deter interest in online teaching. Her work identified a negative perception of distance learning, fear of loss of autonomy, and fear of loss of control over teaching and learning process as barriers. Maguire's (2005) literature review on barriers and motivators to faculty participation in online teaching identified factors associated with intellectual reluctance

reported as significant in seven of the 13 studies she reviewed. The studies were

published between 1997 and 2003 and employed both quantitative and qualitative

methodologies. Those factors included: faculty role and career concerns, concerns about

institutional role and reputation, and apprehensiveness about course and instructional

quality. Concern about loss of autonomy was also identified as a barrier to participation

in Labach's (2011) more recent review of the literature.

Tabata and Johnsrud (2008) similarly found intellectual reluctance factors as

significant in their study of faculty attitudes toward technology and online teaching at a

public 10-campus system. The data indicated that faculty ($n = 2048$) were significantly

less likely to participate in online teaching when they did not feel it aligned with their

needs and values. Another finding from that study was that faculty who believed that

participation was voluntary were less likely to participate. The authors suggested this

reflects "the autonomous nature of faculty in determining their priorities and meeting

their professional responsibilities" (p. 639) and that those faculty have an internal

preference for the traditional classroom. Buchanan, Sainter, and Saunders (2013) reported

that perceptions that technology-enhanced learning was not suitable for their discipline or

would not be received well by students accounted for 14.3% of the variance between

participating and non-participating faculty ($n = 114$) in a PCA analysis of factors

associated with use of online learning technologies at a large university in the United

Kingdom. These intellectual reluctance factors denote faculty concerns related to

autonomy and relatedness: their ability to maintain responsibility for the quality and

control of instruction, the shift from teacher-centered to learner-centered pedagogies, and

their role within their institution and the larger sociocultural system of higher education.

In addition to intellectual reluctance, self-efficacy is the other major category into

which intrinsic barriers to participation in online teaching can be grouped. Self-efficacy is the extent of a person's belief in their capacity to perform: to complete tasks and reach goals (Bandura, 1997). Perhaps even more so for faculty than for other groups of professionals, perception of self as intellectually capable is a powerful motivator or constraint in the adoption of new technologies and instructional processes. Low self-efficacy as a barrier to participation in online teaching is expressed in fears about ability to use technology and to adopt new instructional methods. Buchanan et al. (2013) connected perceived ease of use of technology with self-efficacy and found that Internet self-efficacy was positively related to the adoption of online teaching and learning tools by faculty. Tabata and Johnsrud (2008) also reported increased likelihood of participating in online teaching among faculty who considered themselves skillful in using technology. Logically then, the reverse would have an effect as well. Accordingly, Maguire (2005), Schifter (2000), and Wolcott (2003) reported that fear of technology and low perception of ability to use technology effectively were barriers to faculty adoption of online teaching. Several of the studies referenced thus far also cite faculty concerns about ability to use asynchronous teaching methods as a barrier to participation in online teaching (Buchanan et al., 2013; Maguire, 2005; Wolcott, 2003).

Although intrinsic motivating factors are the best predictors of whether faculty are interested in teaching online, intrinsic barriers also exist and are most often related to intellectual reluctance and self-efficacy factors. Whether intrinsic motivators translate into participation appears to be moderated to some degree by extrinsic factors.

Extrinsic inhibiting and facilitating factors.

The barriers to participation in online teaching reported by faculty are most often external or contextual in nature and can inhibit or facilitate the translation of intent to

participation. This interaction may account for variance in faculty participation. Barriers in particular are more often reported as extrinsic and most obstacles are institutional rather than personal in nature (Maguire, 2005; Schifter, 2000). Faculty and administrators often have different perceptions about factors that influence participation (Maguire, 2005; Mitchell & Geva-May, 2009; Schifter, 2000), which is problematic since many of the extrinsic factors that may moderate the move from intent to actual participation are under administrative control. External inhibitors to faculty participation in online learning include concerns about workload (Beggs, 2000; Betts, 1998; Graham & Jones, 2011; Maguire, 2005; Muilenburg & Berge, 2001; Schifter, 2000; Wolcott, 2003), a lack of faculty voice in policy decisions (Maguire, 2005; Mitchell & Geva-May, 2009; Wolcott, 2003), and a lack of clarity around intellectual property issues (Labach, 2011; Maguire, 2005; Simpson, 2010). External facilitators of faculty participation in online teaching include recognition (Lee, 2001; Maguire, 2005; Simpson, 2010;), availability of technical and instructional support (Beggs, 2000; Buchanan et al., 2013; Gannon-Cook, 2003; Lee, 2001; Maguire, 2005; Mitchell & Geva-May, 2009; Northrup, 1997; Olcott & Wright, 1995), and alignment of distance learning with organizational values (Parthasarathy & Smith, 2009; Schneckenberg, 2009).

The research substantiates a disconnect between faculty and administrative perceptions as to which factors inhibit and facilitate participation in online teaching (Maguire, 2005; Mitchell & Geva-May, 2009; Schifter, 2000). This may account for the gap seen in longitudinal studies of the growth of distance learning and the lag in its acceptance as a legitimate educational model between faculty and administrators (Allen & Seaman, 2013). Administrators often cite extrinsic factors, such as monetary incentives and release time as motivators for faculty to participate in online teaching, whereas

faculty more often report altruistic motivators including intellectual challenge and concern for students (Schifter, 2000; Wolcott, 2003). In Schifter's (2000) study of factors that motivate or inhibit online teaching adoption, administrators cited lack of incentive pay as the fourth most important factor inhibiting adoption, which faculty ranked as 15th. Concern about faculty workload and time was highly rated by both groups. Despite evidence that points to the disconnect between faculty and administrators' perceptions of factors that influence participation in online teaching, the default reward for administrators still seems to be money. A recent study by Hoyt and Oviatt (2013) of administrators responsible for distance learning ($n = 297$) at 110 doctorate-granting research universities found that when those administrators were asked to recommend changes for their institutions to increase faculty participation in online teaching, increased monetary incentives was the most common answer given. The use of financial reward to incent participation is at odds with research that individuals in cultures that highly value autonomy and individualism, such as higher education, are negatively impacted by attempts to control behavior solely by extrinsic reward (Stipek, 1996). This disconnection between faculty and administrator perception impedes the participation of faculty in the development of distance learning programs and in teaching online, since many of the extrinsic factors that moderate the move from intent to actual participation are under administrative control.

Chapter Summary

Intrinsic motivators are often moderated by external or contextual factors which influence whether motivation and intent translate into continued participation. The research examined in this literature review suggests that intrinsic factors are the primary motivators for faculty to participate in online teaching, and that extrinsic factors can then

either inhibit or facilitate that motivation. Many extrinsic factors are institution-specific and under the control of higher education administrators. As institutions move more purposefully into online delivery of courses and programs, a greater understanding of the factors that influence faculty participation in online teaching and how those factors are influenced by organizational context is needed to inform the continued development of distance learning at institutions of higher education. A model (see Figure 3) is proposed for use in analyzing the factors that influence faculty participation in online teaching. In this model, faculty intention is driven by intrinsic motivation related to interest in teaching, intellectual challenge, student-centeredness, and feelings of self-efficacy and autonomy. The degree to which that intention translates into participation is then either inhibited or facilitated by institutional factors, which include institutional support, campus climate, faculty policy voice, and workload.

This chapter linked the research questions, which focus on intrinsic motivators and institutional factors related to faculty participation in online teaching, to literature on the historical growth of distance learning, its impact on faculty role, organizational theory, change theory, faculty development, and human motivation theory. This theoretical framework provides a perspective from which to understand the significance of the research question and how change processes are enacted by individuals and by organizations in a social system. Human motivation theory and the influence of organizational context in higher education provide a lens through which to investigate faculty impetus toward and participation in online teaching. The current state of knowledge related to faculty participation in online teaching is reviewed in order to establish current understanding, identify gaps, and situate this study's research questions within the current state of knowledge.

**INSTRINSIC
MOTIVATORS**

Intellectual Curiosity

Interest in Technology

Importance of Teaching

Self-efficacy

EXTRINSIC INHIBITORS

Lack of Intellectual Property Policy

Lack of Faculty Voice in DL Policy

Workload/Time Concerns

EXTRINSIC FACILITATORS

Alignment with Org Values

Autonomy

Institutional Support

Recognition

Training

I
N
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N
T

PARTICIPATION
IN ONLINE
TEACHING
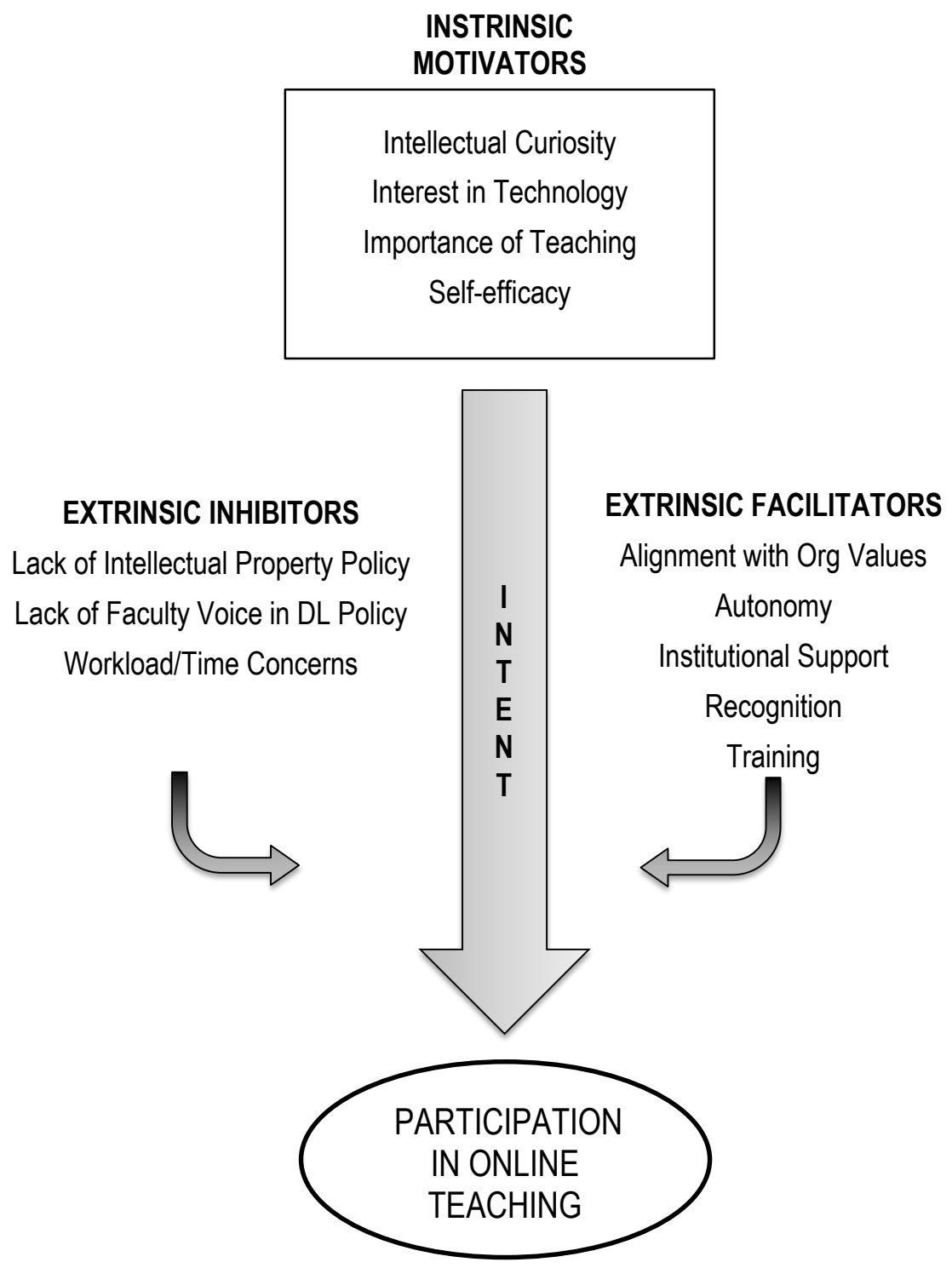
Figure 3. Factors Influencing Faculty Participation in Online Teaching

CHAPTER 3
METHODOLOGY

Introduction

The purpose of this quantitative study was to analyze factors that influence faculty participation in online teaching at higher education institutions in the United States. The variables of interest were identified in the literature review described in Chapter 2 and include factors related to both intrinsic motivation and institutional context. This chapter restates the purpose of the study, gives a description of the research design, defines the study sample, provides information about the data collection instrument, and describes how data were collected and analyzed. The chapter concludes with a discussion of the limitations of the study.

Faculty issues, particularly those related to faculty motivation and the impact of institutional policies on motivation and participation, have not been given sufficient attention in research on distance learning (Wolcott, 2003). Although several studies have focused on factors that motivate faculty to participate in online teaching, the majority of those studies report on research conducted at a single institution, rather than across institutions (Labach, 2011). Little research has been done on the interaction between individual and institutional factors and how institutional factors may influence individual factors related to participation in online teaching. The present study seeks to address this gap in the literature.

Research Questions and Hypotheses

The five questions under investigation in the present study were:

(a) To what extent does faculty interest in teaching predict participation in online teaching?

(b) To what extent does faculty orientation toward student-centered instructional methods predict participation in online teaching?

(c) To what extent does perceived autonomy and control predict faculty participation in online teaching?

(d) To what extent does institutional climate predict faculty participation in online teaching?

(e) To what extent does institutional support predict faculty participation in online teaching?

Based on the review of literature described earlier in this proposal, two major hypotheses guide the analysis of data. First, it is hypothesized that faculty interest in teaching and orientation toward student-centered pedagogy will be related to participation in online teaching. Faculty who report a high degree of interest in teaching will tend to have greater participation in online teaching. Faculty who report a high degree of involvement in student-centered pedagogy will tend to have greater participation in online teaching. Next, it is hypothesized that factors related to institutional context will interact with interest in teaching and student-centered pedagogy, resulting in variance across groups. Faculty interested in teaching and oriented toward student-centered pedagogy who experience high levels of autonomy and control, institutional support, and a positive institutional climate will be more likely to participate in online teaching.

Research Design

This ex post facto correlational study is grounded in the quantitative paradigm,

suitable for testing objective theories about relationships among variables. Correlational

research can be used to investigate the extent to which variations in one factor are

associated with variations in one or more other factors. It permits the measurement of

several variables and their interrelationships simultaneously (Isaac & Michael, 1997). Ex

post facto studies use a similar logic of inquiry as experimental studies, seeking to

determine the influence of variables and assessing claims by statistically testing

hypotheses, however, these studies are quasi-experimental because participants cannot be

randomly assigned to various treatment conditions. This design is suitable for exploratory

cause-effect analysis and appropriate for research settings in which it is not practical or

appropriate to manipulate variables. For example, in this study it would not be possible to

assign professors with a high or low interest in teaching to specific universities that

provide various degrees of institutional support. Thus, the control of these independent

variables occurs through statistical analysis rather than by randomly assigning

participants to control and experimental groups (Silva, 2010). Ex post facto studies begin

by examining independent variables – such as interest in teaching – followed by an

exploration of how those variables influenced the dependent variable, which in this study

is participation in online teaching. If the data derived from quasi-experimental research

such as this are analyzed through the use of inferential statistics then it is reasonable to

assume that findings for this sample are generalizable to the population (Creswell, 2009).

      This survey-based study is cross-sectional, meaning that the data are all collected

at a single point in time. Survey research is an appropriate method for understanding the

characteristics of a population and generalizing a sample to that population (Johnson &

Christensen, 2008). Data collection occurred with an Internet-based survey instrument.

Again, by definition, ex post facto studies analyze data that already exist. The sample

used in this study was drawn from a well-respected national data set of self-reported data from higher education faculty. The use of a large sample, such as the one available from this national data set, allows for reduced sampling error, greater reliability, and increased precision in estimating properties of the population (Isaac & Michael, 1997).

Sample

An annual study by the U.S. Education Department's National Center for Education Statistics (NCES) indicated approximately 1 million full-and part-time instructional staff worked at public and private nonprofit colleges and universities in the United States in the fall of 2011 (Knapp, Kelly-Reid, & Ginder, 2012). In order to obtain a representative sample of that population, a large national data set was utilized. The sample for the present study comes from the 2010-2011 Faculty Survey administered by the Higher Education Research Institute (HERI) at the University of California, Los Angeles (UCLA). HERI triennially administers a survey to a national sample of faculty across disciplines and higher education institution types. The HERI survey collects information about how faculty spend their time, how they interact with students, their preferred teaching practices, their perceptions of institutional climate, their sources of stress and satisfaction, and demographic information. These data have been collected since 1989. The 2010-2011 sample included 45,177 responses from faculty at 472 institutions. The HERI Faculty Survey is administered at institutions that pay to participate in the survey and receive customized data reports of their institutional profile, detailed findings, and a comparison of their institution to national norms. Although each participating institution determines its own sampling methods for data collection, HERI requires that a minimum percentage of all full-time undergraduate faculty complete the survey. Those minimums are 35% for four-year colleges and 20% for universities. For

HERI purposes, university is defined by identification as "research university" or "doctoral/research university" according to the 2010 Carnegie Basic Classification. In addition to the responses from these institutions, the HERI Faculty Survey is administered to a supplemental sample of faculty and institutions using a stratified institutional sampling frame to ensure that all institutional types are appropriately represented. For additional information on the psychometric properties of the survey instrument, see DeAngelo, Hurtado, Pryor, Kelly, Santos, and Korn (2009) and Hurtado, Eagan, Pryor, Whang, and Tran (2012).

Instrumentation

The 2010-2011 HERI Faculty Survey questionnaire includes questions that pertain to a wide variety of faculty issues, including faculty workload, professional development activities, instructional and evaluation methods, attitudes toward undergraduate education goals, scholarly activity, involvement in civic activities, workplace satisfaction, compensation satisfaction, sources of personal and career stress, institutional climate, and perceptions of institutional commitment to various social constructs. Variables in the data set directly related to the areas of interest in this study include individual and institutional factors identified in the literature as related to participation in online teaching as shown in Figure 4. These independent variables include interest in teaching, student-centered pedagogy, autonomy and control, instructional support, and institutional climate. A measure of the dependent variable, online teaching, is also included in the data set. A copy of the survey instrument is available in Appendix A.

INSTITUTIONAL SUPPORT

INSTITUTIONAL CLIMATE

AUTONOMY AND CONTROL

STUDENT-CENTERED PEDAGOGY

IMPORTANCE OF TEACHING
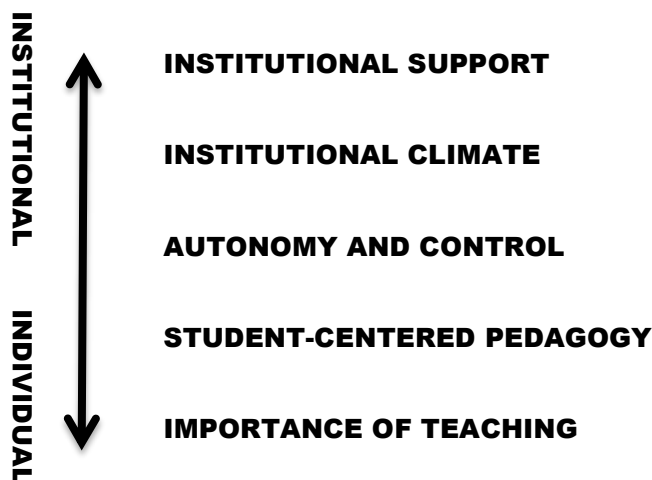
Figure 4. Factors Related to Faculty Participation in Online Teaching

Validity and Reliability

        Reliability and validity are important considerations in any type of research. For psychometric instruments, reliability refers to the ability of scores on an instrument to consistently measure a construct. Validity refers to whether responses to a particular set of test items accurately measure the underlying construct the researcher is attempting to measure (Johnson & Christensen, 2008). Survey research is a powerful tool for collecting data; however, developing an instrument that effectively yields valid and reliable data requires extensive effort. Consequently, using a psychometrically sound standardized research instrument is a prerequisite in determining if the interpretations of the scores themselves are valid (Kane, 2006). The HERI survey instrument has been administered eight times over 21 years. The instrument items have remained largely stable in each administration, with minor revisions. Until 2007, the survey was administered using a mailed paper form. Beginning with the 2007 survey, the survey was administered in electronic form, via invitation emails with links to the HERI portal. The electronic data collection method improved consistency in administration and confidentiality of

participants (DeAngelo et al., 2009).

The HERI researchers used exploratory factor analysis, assumption checking, and parameter estimation in their development of the instrument's items and constructs. Cronbach's alpha is not reported for scores on instruments developed using Item Response Theory (IRT). Instead, HERI researchers used an iterative factor-analytic technique to evaluate whether each construct's set of items are unidimensional (Sharkness, DeAngelo, & Pryor, 2010). Item analysis is a technique for measuring the quality of test or survey questions in order to understand how appropriate they are for respondents and how well they measure a trait or ability (Gochyyev & Sabers, 2010). Classical Test Theory (CTT) and Item Response Theory (IRT) provide different methods for item analysis (Rogers, 2010).

In CTT, analyses are performed on a test as a whole rather than on individual items, and, although item statistics can be generated, those statistics are test and sample dependent. IRT belongs to a family of latent trait models used to establish psychometric properties of items and scales. The IRT method provides greater theoretical and mathematical sophistication in establishing the psychometric properties of items and scales than CTT (Sharkness & DeAngelo, 2011). IRT is based on the supposition that an individual's response to a test item is a probabilistic function of characteristics of the person and characteristics of the item. Person characteristics are an individual's level of the latent traits being measured, and item characteristics are features such as difficulty and discriminating power. Latent variables, such as self-efficacy, cannot be measured directly but can be inferred from corresponding quantifiable data. Unlike the CTT model in which an observed score represents an individual's true score plus random error, the IRT model assumes that every individual has a true location on a continuous latent

dimension, referred to as theta or θ that probabilistically influences their response to an item related to the latent trait the theta represents. IRT allows for the construction of scales that can maximally differentiate respondents (Sharkness & DeAngelo, 2011). Parameter estimates for each item and construct in the 2010 Faculty Survey, as well as estimated standard errors of percentages for groups of various sizes, are published in the CIRP Construct Technical Report (Sharkness, DeAngelo, & Pryor, 2010).

Data Analysis

The literature review provided support for the selection of empirically-based variables in the present study. The HERI data set contains a rich set of variables, which can be operationalized to represent the factors of interest in the present study. The alignment of research questions and constructs, with supporting references identified in the literature review, are presented in Table 1 along with the study variables.

The literature has established that intrinsic factors, particularly concern for student learning and interest in high levels of student interaction, are the strongest motivators toward online teaching for faculty (Dillon & Walsh, 1992; Maguire, 2005; Wolcott, 2003), so variables related to interest in teaching and variables related to student-centered pedagogy were included in the analysis. Because extrinsic factors related to institutional context may threaten faculty perceptions of their autonomy, competence, and relatedness and act as barriers to growth and to the adoption of new processes (Labach, 2011; Maguire, 2009; Schifter, 2000), variables related to autonomy and control were also included. Institutional support has been shown to be a facilitator for faculty of participation in online teaching (Gannon-Cook, 2003, Maguire, 2005), thus variables related to faculty development and rewards for using instructional technology were considered as well.

Table 1. Research Questions, Constructs, and Variables

Research Question	*Construct* Study Variables

To what extent does faculty interest in teaching predict participation in online teaching?	*Interest in Teaching*
	 (Dillon & Walsh, 1992; Maguire, 2005; Wolcott, 2003)
	     Teaching Importance
	     Participated in a teaching enhancement workshop
	     Paid workshops outside the institution focused on teaching

To what extent does faculty orientation toward student-centered instructional methods predict participation in online teaching?	*Student-centered Pedagogy* (Bollinger & Wasilic, 2009; Shea, Pickett & Li, 2005) HERI Scale: Measures the extent to which faculty use student-centered teaching and evaluation methods in their course instruction

To what extent does perceived autonomy and control predict faculty participation in online teaching?	*Autonomy and Control*
	 (Labach, 2011; Maguire, 2009; Ryan & Deci, 2000; Schifter, 2000; Wolcott, 2003)
	     Autonomy and independence
	     Freedom to determine course content
	     Faculty are sufficiently involved in campus decision-making

To what extent does institutional climate predict faculty participation in online teaching?	*Institutional Climate*
	 (Kezar, 2001; Maguire, 2009; Schneckenberg, 2009; Tabata & Johnsrud, 2008)
	     The faculty are typically at odds with campus administration
	     Administrators consider faculty concerns when making policy
	     The administration is open about its policies

To what extent does institutional support predict faculty participation in online teaching?	*Institutional Support*
	 (Beggs, 2000; Gannon-Cook, 2003; Lee, 2001; Northrup, 1997; Simpson, 2010; Stipek, 1996)
	     Received incentives integrate new technology into your classroom
	     There is adequate support for faculty development
	     Faculty are rewarded for efforts to use instructional technology

A list of all variables available from the 2010-2011 HERI faculty data set is detailed in Appendix B. The dependent variable is a dichotomous item that asked: "During the past two years, have you engaged in teaching an exclusively web-based course at this institution?" Faculty could respond Yes or No. This variable represents participation in online teaching.

Data analysis included examination of data and descriptive statistics, the selection of cases from public institutions, running *t*-tests to look at group differences, examination

of correlations for dependent and independent variables, variable recoding, exploratory factor analysis, and logistic regression. Inspection of a data set can help identify input errors, and add soundness to findings (Wilkinson, 1999). All procedures were performed using the Statistical Package for the Social Sciences (SPSS®) version 22 (IBM Corporation, 2013). Logistic regression was used to determine how well the dichotomous dependent variable (i.e., participation in distance learning), was predicted by the independent variables.

Logistic regression (or logit modeling) is a useful technique when the researcher wishes to predict the probability of the occurrence of an event and the data cases fall into one of two possible outcome categories. The logistic curve can readily depict the distribution of a dichotomous outcome variable. A binary (dichotomous) grouping variable serves as the dependent variable in the analysis, and a set of two or more continuous and/or categorical variables serves as predictors. Linear regression for a continuous predictor variable and a binary outcome variable results in a data plot with two parallel lines, which would be difficult to describe using ordinary least squares (OLS) regression. Logistic regression is preferred over other methods for predicting dichotomous categorical outcomes because of its lack of required assumptions, ease of interpretation, and the wide range of diagnostic information provided by the technique (DeMaris, 1995; Hosmer & Lemeshow, 1989; Makalic & Schmidt, 2011; Peng, Lee, & Ingersoll, 2002; Peng & So, 2002). Logistic regression does not require an assumption of homoscedasticity or that data come from a normally distributed set, making it useful in many situations. Logistic regression can produce unstandardized and standardized coefficients with a similar structure to those that are used in other regression techniques (DeMaris, 1995; Menard, 2011), making the results interpretable for both statistical and

practical significance.

Although logistic regression does not have the same strict assumptions as other techniques, there are considerations to be attended to in the research design (Hair et al., 2010). Typically, logistic regression requires large sample sizes. In 2000, Hosmer and Lemeshow recommended sample sizes greater than 400 (as cited in Hair et al., 2010). Attention should also be paid to the sample size per group of the outcome variable. The requirements here are much greater than for multiple regression, with a recommendation of at least 10 observations per estimated parameter. The last requirement for consideration is the impact of nonmetric independent variables. Their use in a model results in further subdivision of cells, and cells with very small sample sizes are excluded from analysis. The presence of a number of cells with very small samples sizes can hinder the convergence of a model (Hair et al., 2010; Menard, 2010). The data set used in this study met the assumptions for logistic regression.

Institutional Review Board Approval

The HERI researchers obtained approval for their study from the Office of Human Research Protection program at UCLA (see Appendix C). HERI provides data files to researchers that do not contain individual or institutional identifiers in order to protect the confidentiality of participants. The University of North Florida's IRB office was consulted, and because the study does not include intervention or interaction with human subjects and all data used in the study were de-identified, the study was not considered to be human subject research. As such, IRB review and approval was not necessary, as documented in Appendix D. The Cooperative Institutional Research Program (CIRP) at HERI also requires that researchers submit a proposal prior to granting access to their data. Proposals are evaluated based on several criteria including: alignment between data

and research questions, robust study design, evidence of theoretical grounding, method of analysis, and indication that the research will advance scholarship. CIRP approved the proposal for the present research study and provided access to the 2010-2011 faculty survey data set. See Appendix E for the submitted proposal.

Study Limitations

Non-experimental studies have a limited ability to establish cause and effect relationships, and the researcher has less control over independent variables (Isaac & Michael, 1997). The data used in this study are self-reported which can affect the degree to which interpretations of these data are valid. For example, reactive effects may occur when participants choose responses that seem socially desirable because they are participating in a research study. Selection history effects may also occur when responses are affected by an event that biases the participant's feelings at the time the survey instrument is administered (Johnson & Christensen, 2008). Additionally, the use of a secondary data set limits the researcher to the variables and measures included in that data set. For example, in the HERI survey, respondents were only asked if they had taught an exclusively web-based course in the last two years, thus the researcher cannot know if faculty taught in an exclusively web-based format three years ago. It is also important to note that the HERI survey items related to autonomy and control as well as institutional climate were designed to measure general faculty perception at their institution, not faculty's perception of those constructs specifically in the context of online teaching.

Finally, the sample is not a true random sample. Instead the sample is comprised of faculty from institutions in the United States who participated in the HERI faculty survey, along with supplemental responses from non-participating institutions – using a

stratified institutional sampling frame in order to ensure that all institutional types were appropriately represented in the normative national profile. Although any ex post facto study is subject to these limitations and less persuasive in determining causality than an experimental study, it is an appropriate design for the variables and environment of interest in the present study. Despite these limitations, statistical testing of the dependent and independent variables in an ex post facto study can provide sound evidence of a causal relationship between variables (Silva, 2010).

This chapter included a description of the population and sample in the study, provided information about the data collection instrument, described how data were collected and how participant confidentiality was preserved. The data analysis methods were presented with rationale, and the limitations of the study identified. Chapter 4 includes a presentation and discussion of the results of the analysis.

CHAPTER 4 DATA ANALYSIS

Introduction

As stated in Chapter 1, the present study examined the influence of intrinsic motivation and institutional context on faculty decisions to participate in online teaching at public institutions of higher learning. This study's research questions examined both individual and contextual variables. Specifically, the five questions under investigation in the present study were:

(a) To what extent does faculty interest in teaching predict participation in online teaching?

(b) To what extent does faculty orientation toward student-centered instructional methods predict participation in online teaching?

(c) To what extent does perceived autonomy and control predict faculty participation in online teaching?

(d) To what extent does institutional climate predict faculty participation in online teaching?

(e) To what extent does institutional support predict faculty participation in online teaching?

In order to answer the research questions and test the corresponding hypotheses, data from the 2010 Higher Education Research Institute (HERI) Faculty Survey were analyzed. These analyses included an examination of data and descriptive statistics, the selection of cases from public institutions, running t-tests to look at group differences, examination of correlations for dependent and independent variables, variable recoding, exploratory factor analysis, and finally, logistic regression. Descriptive statistics were

computed for independent and dependent variables and are reported in this chapter. In order to detect differences between the predictor variable means from the group that taught online and the group that had not taught online, independent *t*-tests were run. Exploratory factor analysis was used to investigate the underlying structure among the predictor variables. From the factors retained, two logistic regression analyses were computed to account for variance in those factors. All statistical analyses were performed using Statistical Package for the Social Sciences (SPSS®) version 22 (IBM Corporation, 2013). In this chapter, the findings are presented and used to answer the research questions and corresponding hypotheses.

Sample Demographics

Academic demographic data were examined to better understand the characteristics of faculty in the study (*n*=45,177). The population of interest in the present study was faculty teaching at public institutions of higher education. Less than half of the HERI sample met this criterion, resulting in an N of 20,148. Frequencies for academic demographic variables are reported for both groups in Table 2. Academic demographic distributions were similar across the samples for academic rank, tenure status, length of time at institution, and discipline. The majority of survey respondents were tenured or in tenure-track lines. In the public-only sample, 40.2% of the respondents were from public universities, 53.2% from public colleges, and the remainder from public 2-year colleges and Historically Black Colleges and Universities (HBCUs).

Table 2

Academic Demographics for HERI and Public-Only Samples

Variables	HERI sample	%	Public only	%
Principal Activity				
Administration	3,339	7.4%	1,652	8.2%
Teaching	37,223	82.4%	15,912	79.0%
Research	3,251	7.2%	1,854	9.2%
Services to clients /patients	631	1.4%	344	1.7%
Other	691	1.5%	368	1.8%
Institution Type				
Public Universities	8,078	17.9%	8,078	40.2%
Private Universities	7,260	16%		
Public Colleges	10,713	23.7%	10,713	53.2%
Private Nonsectarian Colleges	5,347	11.8%		
Religious Colleges	11,740	26%		
Public 2-yr Colleges	1,095	2.5%	1,095	5.4%
Private 2-yr Colleges	3	0%		
HBCU	411	0.8%	262	1.3%
Academic Rank				
Professor	12,070	26.7%	4,989	24.8%
Associate Professor	11,068	24.5%	4,434	22.0%
Assistant Professor	10,232	22.6%	3,888	19.3%
Lecturer	3,127	6.9%	1,807	9.0%
Instructor	4,952	11.0%	1,875	9.3%
Tenure Status				
Tenured	20,437	45.2%	9,150	45.4%
Tenure-track	7,875	17.4%	3,366	16.7%
Not tenured/tenure-track	10,819	23.9%	4,369	21.7%
No tenure system	2,411	5.3%	140	.7%
Years at Institution				
< 7	13,273	29.3%	5,673	28.2%
7 – 15	9,437	21%	4,329	21.6%
16-25	6,566	14.4%	2,944	14.7%
>25	4,458	9.7%	1,803	9%
Discipline				
Arts and Humanities	7,664	16.9%	3,268	16.2%
Biological Sciences	2,213	4.9%	1,020	5.1%
Business	2,277	5%	872	4.3%
Education	4,222	9.3%	2,032	10.1%
Engineering	974	2.2%	543	2.7%
Physical Sciences	3,357	7.4%	1,515	7.5%
Social Sciences	6,539	14.5%	2,900	14.4%
Other Disciplines	4,439	9.7%	1,612	7.9%
Other Professions	3,413	7.5%	1,540	7.7%
Total	45,177		20,148	

Note. Discipline areas recoded into the eight Faculty Survey for Student Engagement (FSSE)
Academic Discipline Categories.

Variables

Thirteen predictor variables were selected from the HERI faculty survey to represent the constructs of interest in this study. One predictor variable that was negatively stated was reverse-coded prior to the analysis of the data. Other predictor variables were recoded to reduce noise in the analysis from non-meaningful responses. Those changes included "Not Applicable/Not Available/Not Eligible" responses that were recoded to "No" for satisfaction scale and behavior items. Table 3 presents the predictor variables in the present study.

Table 3
Variables in Study

Construct	Survey Item	Variable Label
Interest in Teaching	Teaching Importance	TCH1
	Participated in a teaching enhancement workshop	TCH2
	Paid workshops outside the institution focused on teaching	TCH3
Student-Centered Pedagogy	HERI Scale: Measures the extent to which faculty use student-centered teaching and evaluation methods in their course instruction	PED
Autonomy and Control	Autonomy and independence	AC1
	Freedom to determine course content	AC2
	Faculty are sufficiently involved in campus decision-making	AC3
Institutional Climate	The faculty are typically at odds with campus administration	IC1
	Administrators consider faculty concerns when making policy	IC2
	The administration is open about its policies	IC3
Institutional Support	Received incentives to integrate new technology into classroom	IS1
	There is adequate support for faculty development	IS2
	Faculty are rewarded for efforts to use instructional technology	IS3

Descriptive Statistics

The dependent variable of interest in the current study was participation in online teaching. A minority of faculty reported having taught an exclusively web-based course at their institution in the past two years in both the HERI sample and the public-only sample. In the HERI sample *(n=45,177)*, 16.9% (SD=.375), reported having taught online. In the public-only sample (*n*=20,148), a larger group, 21.4% (SD=.410), reported

having taught online. As noted in the literature review, academic disciplines have notoriously different subcultures (Becher, 1994), and this is reflected in the variation in participation in teaching online by academic discipline. Participation is highest in the professional fields: Education (36%), Business (31%), and Other Professions (31%), which includes health professions. Biological Science (8%), Physical Science (11%), and Arts and Humanities (15%) faculty report the lowest participation.

Data Distributions and Comparison of Means

The scores for most independent variables were normally distributed, with skewness and kurtosis values ± 1. Assumptions of normality were checked and verified, with one mean score – for "The Importance of Teaching" – being negatively skewed (-1.720). Due to the large sample size, violation of assumptions of normality was not likely to affect the p values or confidence intervals, thus these data were retained. Faculty who taught online reported a significantly higher valuation regarding the importance of teaching (M=3.76, SD=.462) in comparison to those who did not teach online (M=3.67, SD=.558). Table 4 provides the descriptive statistics for all variables in the study.

T-tests of independence were conducted to explore group differences. In order to control for Type I error from running multiple statistical tests, a Bonferroni correction was made to the critical alpha level for the *t*-tests. The Bonferroni correction compensates for the multiple tests by adjusting the critical alpha level. The new critical alpha level is calculated by dividing the desired alpha level by the number of tests (Hair, Black, Babin, & Anderson, 2010). In this case, thirteen tests were run, one for each independent variable, so the desired p level of .05 was adjusted to .004 (.05/13).

For six of the 13 dependent variables, independent sample *t*-tests indicated statistically significant differences between groups. Differences in scores for participation

in a teaching enhancement workshop, $t(7247)=22.90$, $p<.004$; workshops outside the institution focused on teaching, $t(5365)=14.02$, $p<.004$; student-centered pedagogy, $t(5630)=9.19$, $p<.004$; incentives for integration of new technology, $t(4789)=25.39$, $p<.004$; rewards for use of instructional technology, $t(5532)=3.79$, $p<.004$; and adequate faculty development $t(5362)=2.54$, $p<.004$.; were all statistically significant. These results suggest that faculty who value teaching, use student-centered pedagogical methods, participate in professional development, and are rewarded for efforts to use instructional technology are more likely to teach online.

Table 4

Descriptive Statistics for Variables

	Min	Max	$\bar{x}$	SD
Taught Online	.00	1.00	.21	.41
Teaching Importance	1.00	4.00	3.69	.54
Faculty are sufficiently involved in campus decision making	1.00	4.00	2.59	.89
There is adequate support for faculty development	1.00	4.00	2.63	.849
The faculty are typically at odds with campus administration*	1.00	3.00	2.34	.94
Faculty are rewarded for efforts to use instructional technology	1.00	3.00	1.85	.69
Administrators consider faculty concerns when making policy	1.00	3.00	1.87	.64
The administration is open about its policies	1.00	3.00	1.93	.68
Student-Centered Pedagogy (SCP)	24.83	74.21	49.46	9.35
Paid workshops outside the institution focused on teaching	1.00	2.00	1.29	.46
Received incentives to integrate new technology	1.00	2.00	1.20	.40
Satisfaction with autonomy and independence	1.00	4.00	3.16	.78
Satisfaction with freedom to determine course content	1.00	4.00	3.37	.72
Participation in a teaching enhancement workshop	1.00	2.00	1.59	.49

Note. For all variables except SCP, minimum and maximum also indicate range. SCP is a HERI construct that represents a set of statistically related items that measure the extent to which faculty use student-centered teaching and evaluation methods in their course instruction. HERI constructs are scaled to a mean of 50 and a standard deviation of 10.
*Scores reverse coded.

Bivariate Correlations for the Independent and Dependent Variables

Intercorrelations among the dependent and independent variables are presented in Table 5. Examination of these correlations indicate that three of the independent variables

related to professional development and reward structures had a small correlation with the dependent variable (.11, .19, and .16). Several of the independent variables were moderately to highly correlated with one another. Faculty involvement in campus decision-making was highly correlated with other factors related to campus climate and support. The strongest correlation (.72) was found between the two variables related to campus policy-making. These moderate and strong correlations may indicate some multicollinearity in the data. In the planned exploratory factor analysis, the calculation of factor scores will address this concern prior to the use of logistic regression.

The initial exploratory principal components analysis resulted in four factors with prerotational eigenvalues greater than one. Examination of the scree plot indicated an initial break between Factors I and II, and a flattening out of eigenvalues between Factors IV and XIII. In this solution, variables related to teaching importance and student-centered pedagogy were grouped into the same factor. Because those variables were conceived as distinct constructs in the study's research questions, another analysis was run with five factors specified in hopes of finding a model that would discriminate between those constructs. The five-factor solution had multiple nuisance items in the factor structure matrix and was not conceptually interpretable, so it was discarded.

Table 5
Bivariate Correlations for Independent and Dependent Variables

	Online Teaching	Interest in Teaching			Student Centered Pedagogy	Autonomy and Control			Institutional Climate			Institutional Support		
	ONLINE	TCH1	TCH2	TCH3	PED	AC1	AC2	AC3	IC1	IC2	IC3	IS1	IS2	IS3
ONLINE	1	.072**	.163**	.108**	.075**	-.011	-.012	.017*	-.005	.008	.015	.193**	.020*	.029**
TCH1	.072**	1	.158**	.146**	.171**	.057**	.080**	.050**	.016	.055**	.057**	.064**	.047**	.028**
TCH2	.163**	.158**	1	.255**	.233**	-.026**	-.037**	.032**	.013	.046**	.033**	.158**	.031**	.043**
TCH3	.108**	.146**	.255**	1	.178**	-.014	-.024**	.030**	.010	.033**	.023**	.164**	.029**	.024**
PED	.075**	.171**	.233**	.178**	1	.002	.014	.033**	.001	.033**	.027**	.092**	-.011	.016
AC1	-.011	.057**	-.026**	-.014	.002	1	.459**	.272**	.293**	.282**	.283**	.026**	.280**	.146**
AC2	-.012	.080**	-.037**	-.024**	.014	.459**	1	.146**	.130**	.169**	.155**	.039**	.163**	.115**
AC3	.017*	.050**	.032**	.030**	.033**	.272**	.146**	1	.580**	.621**	.612**	.047**	.420**	.255**
IC1	-.005	.016	.013	.010	.001	.293**	.130**	.580**	1	.546**	.561**	.019	.389**	.228**
IC2	.008	.055**	.046**	.033**	.033**	.282**	.169**	.621**	.546**	1	.716**	.062**	.370**	.363**
IC3	.015	.057**	.033**	.023**	.027**	.283**	.155**	.612**	.561**	.716**	1	.042**	.379**	.304**
IS1	.193**	.064**	.158**	.164**	.092**	.026**	.039**	.047**	.019	.062**	.042**	1	.053**	.176**
IS2	.020*	.047**	.031**	.029**	-.011	.280**	.163**	.420**	.389**	.370**	.379**	.053**	1	.310**
IS3	.029**	.028**	.043**	.024**	.016	.146**	.115**	.255**	.228**	.363**	.304**	.176**	.310**	1

** Correlation is significant at the 0.01 level (two-tailed)
 *Correlation is significant at the 0.05 level (two-tailed)

The final analysis was run with four factors extracted and rotated to the varimax criterion. These four factors cumulatively accounted for 58.66% of the variance in the solution. The rotated factor matrix for this solution is presented in Table 6 and highlights factor structure coefficients greater than |.50|. Factor structure coefficients of |.30| or greater are considered significant for a sample size larger than 350 (Hair, Black, Babin, & Anderson, 2010). The item related to rewards for use of instructional technology was a doublet, with a noteworthy structure coefficient for both Factors I and IV. That item aligned better conceptually with Factor IV though, as supported by its higher value there.

Table 6

EFA Component Matrix

Survey Item	Factor			
	I	II	III	IV
The administration is open about its policies	.861	.062	.091	.025
Administrators consider faculty concerns when making policy	.857	.056	.106	.080
Faculty are sufficiently involved in campus decision making.	.844	.050	.101	.015
The faculty are typically at odds with campus administration*	.769	.010	.044	-.052
There is adequate support for faculty development	.599	-.008	.241	.172
Participated in a teaching enhancement workshop	.054	.664	-.129	.147
Student-Centered Pedagogy	.025	.627	.011	-.037
Paid workshops outside the institution focused on teaching	-.003	.597	-.042	.270
Teaching Importance	.027	.575	.213	-.195
Satisfaction with freedom to determine course content	.072	.016	.862	.050
Satisfaction with autonomy and independence	.332	-.013	.742	.029
Received incentives to integrate new technology into your classroom	-.035	.151	.031	.843
Faculty are rewarded for their efforts to use instructional technology	.440	-.056	.092	.523

*Note. * Item scores reverse coded*

Factor Interpretation

Factor I had a prerotational eigenvalue of 3.45, and accounted for 23.56 (3.45/13) percent of the variance across the solution. Using a minimum factor saliency criterion of |.50|, this factor was most highly saturated with four items related to institutional climate. Factor II had a prerotational eigenvalues of 1.56, and accounted for 11.98 (1.56/13)

percent of the variance in the solution. Using a minimum factor saliency criterion of |.50|, this factor was most highly saturated with four items related to teaching interest and student-centered pedagogy. Factor III had a prerotational eigenvalues of 1.46 and accounted for 10.15 (1.46 /13) percent of the variance. Using a minimum factor saliency criterion of |.50|, this factor was most highly saturated with two items related to faculty perceptions of autonomy and control. Factor IV had a prerotational eigenvalues of 1.16 and accounted for 8.93 (1.16/13) percent of the variance in the solution. Using a minimum factor saliency criterion of |.50|, this factor was highly saturated with two items related to incentives and rewards for faculty use of technology. Factor scores were calculated for the four factors and labeled as Factor I: Institutional Climate, Factor II: Interest in Teaching, Factor III: Autonomy and Control, and Factor IV: Institutional Reward. These factor scores were retained for use in logistic regression analysis to test the study's hypotheses.

The factor analysis included all cases in the data set from public institutions (*n*=20,148). During calculation of factor scores, cases with missing values were excluded and the number of cases dropped to only 6,185. An examination of frequencies for these predictor variables, shown in Table 7, indicates that survey participants failed to respond to several questions in high numbers. Particularly noteworthy is the low response rate for the question related to tension between faculty and campus administrators, for which less than half of the participants responded to the item. This reluctance by faculty to identify tensions with administrators, even in an anonymous survey, is troubling and may suggest a fear of reprisal. Given the large number of missing values, the decision was made to proceed with the logistic regression with the smaller sample, rather than using a statistical method to compute values for the missing cases.

Table 7

Missing Values for Predictor Variables

	N	
	Valid	Missing
Importance: Teaching	19410	738
Faculty are sufficiently involved in campus decision making	16093	4055
There is adequate support for faculty development	16139	4009
Faculty are rewarded for their efforts to use instructional technology	16879	3269
Administrators consider faculty concerns when making policy	16880	3268
The administration is open about its policies	16876	3272
The faculty are typically at odds with campus administration	8623	11525
Student-Centered Pedagogy	15163	4985
Paid workshops outside the institution focused on teaching	16729	3419
Received incentives to integrate new technology into your classroom	16626	3522
Autonomy and independence	16671	3477
Freedom to determine course content	16148	4000
Subject I.D.	20148	0
Participated in a teaching enhancement workshop	19152	996

Logistic Regression

Logistic regression relies on the maximum likelihood estimation technique (Hair, Black, Babin, & Anderson, 2010) and is appropriate for predicting dichotomous outcomes because it results in a binomial distribution of errors in which the conditional mean of the regression equation is bounded by 0 and 1(Hosmer & Lemeshow, 1989). Outcome variables in logistic regression are predicted using the logit, an odds-ratio formula based on the logistic curve. In the present study, logistic regression was used to test the hypotheses and determine whether the constructs of interest predicted group membership. The factor scores for Institutional Climate, Interest in Teaching, Autonomy and Control, and Institutional Reward developed in the exploratory factor analysis were entered as predictor variables in the SPSS® Binary Logistic Regression Analysis procedure, using block entry.

Model Fit

In this analysis the -2 log likelihood decreased from 6543.824 in the null model,

to 6233.685 in the selected model, indicating an improvement in fit between the data and

the model. The commonly used test statistic for assessing model fit is the chi-square test.

As use of logistic regression has grown, an increase in discussion of the use of overall

summary measures of goodness of fit has appeared in the literature. New measures have

been proposed, but the Pearson chi-square/unweighted sum-of-square statistic remains

popular and its use continues to be recommended (Hosmer, Taber, Lemeshow, 1991;

Hosmer, et al., 1997; Hosmer & Hjort, 2002). The presence of a relationship between the

dependent variable and a combination of independent variables is based on the statistical

significance of the model chi-square at step 1 after the independent variables have been

added to the analysis. For this analysis, the chi-square test statistic for the model,

(310.14) df 4, was statistically significant at $p< .01$, indicating a good fit of the data to the

model. These statistics are reported in Table 8. The chi-square used in logistic regression

is a likelihood ratio chi-square test, computed in SPSS® by contrasting a model with no

independent variables (includes the constant only) with a model that includes the

predictor variables (George & Mallery, 2010). The Hosmer-Lemeshow test is also an

inferential Pearson chi-square statistic. That statistic is based on observed and estimated

frequencies in a table of $2 \times g$, in which the value of g is the number of groups formed by

the estimated probabilities (Peng & So, 2002). Statistical significance implies a poor fit

between the model and data. In this analysis, the test statistic, 4.024 (df 8), is not

statistically significant, another indication of good fit for the model. Multicollinearity in a

logistic regression solution is detected by checking the standard errors for the b

coefficients. A standard error larger than 2.0 indicates numerical problems, such as

multicollinearity among the independent variables, and an uninterpretable model (George & Mallery, 2010). None of the independent variables in this analysis had standard errors larger than 2.0.

The Cox & Snell and the Nagelkerke tests are descriptive Pseudo R^2 measures that attempt to explain how much of the variation in the outcome variable can be explained by the predictor variables in the model (Peng, Lee, & Ingersoll, 2002; Peng & So, 2002). Of the two, the Nagelkerke test is preferable because it converts the Cox & Snell test to a zero to one scale (Menard, 2010). In this analysis, the R^2 for the Nagelkerke test was .075, indicating effect size of 8%. This statistic is called a pseudo R^2 because it is not mathematically equivalent to the R^2 used in linear regression as an estimator of discriminatory power. Although the model was deemed statistically significant, the small effect size is low for purposes of practical significance.

The classification table provided by SPSS® indicates that 1377 cases were misclassified and that overall fit exceeded chance. The classification accuracy rate was 77.7%, which is greater than prediction by chance, which would be 50%. This rate met the 1.5 rule of thumb for prediction accuracy criteria of 75% (1.5 x 50% = 75%). The model did a better job of predicting not teaching online than of teaching online, as can be seen in the classification table and the classification plot, Figure 5, where the cases are grouped to the left of the cut line.

```
          Step 1: Observed Groups and Predicted Probabilities

      400 +                                                                  +
          I                                                                  I
          I                     11 1 1                                       I
    F     I                     11 1111                                      I
    R 300 +_____100101011_____ +
    E     I                   0001000011                                     I
    Q     I                   0000000011                                     I
    U     I                   00000000001                                    I
    E 200 +_____00000000001_1_____ +
    N     I                 100000000000111___1                             I
    C     I                  00000000000010111111                           I
    Y     I                  000000000000000110111                          I
      100 +_____00000000000000000000011_____ +
          I                00000000000000000000000111       1                I
          I                000000000000000000000000111111111111             I
          I             0000000000000000000000000000000000000001111         I
Predicted ---------+---------+---------+---------+---------+---------+---------+---------+---------+----------
    Prob:  0      .1        .2        .3        .4        .5        .6        .7        .8        .9        1
    Group: 00000000000000000000000000000000000000000000000001111111111111111111111111111111111111111111111111

          Predicted Probability is of Membership for 1.00
          The Cut Value is .50
          Symbols: 0 - .00
                   1 - 1.00
          Each Symbol Represents 25 Cases.
```

Figure 5. Classification Plot

Interpretation of Coefficients

"The interpretation of any fitted model requires that we be able to draw practical inferences from the estimated coefficients in the model" (Hosmer & Lemeshow, 1989, p. 38). Unstandardized coefficients are useful for comparing predictor variables across different populations, and standardized coefficients are useful for comparing and ranking the effects of different predictors within the model (Menard, 2011). In logistic regression, the Exp(B) serves as the unstandardized coefficient. The Wald statistic is a measure of the significance of B for each variable and used to test statistical significance for each predictor variable, in combination with degrees of freedom (Gelman & Hill, 2007; George & Mallery, 2010). As shown in Table 8, neither Institutional Climate nor Institutional Control was statistically significant in the model, but Interest in Teaching and Reward were statistically significant. Reward and Interest in Teaching were both strong predictors in the model. Positive coefficients indicate that the ln odds are higher for that independent variable, meaning that the predicted outcome is more likely to occur when that condition is present (Kaufman, 1996). The value of Exp(B) for Interest in

Teaching was 1.455, which indicates that a one unit increase in Interest in Teaching increased the odds that survey respondents had taught online by 45.5%. The value of Exp(B) for Institutional Reward was 1.460 which indicates that a one unit increase in Institutional Reward increased the odds that survey respondents had taught online by 46%. Although not statistically significant, the value of Exp(B) for Institutional Climate was 1.017 which indicates that a one unit increase in Institutional Climate increased the odds that survey respondents had taught online by 3%. Both Interest in Teaching and Institutional Reward had a moderate effect size of 38%.

In order to test the study's hypothesis that factors related to institutional context would interact with interest in teaching and student-centered pedagogy, and that faculty interested in teaching and oriented toward student-centered pedagogy who experience high levels of autonomy and control, institutional support, and a positive institutional climate would be more likely to participate in online teaching, another logistic regression was run with interaction effects added to the model. Interaction effects test whether the effect of one variable changes when another variable changes (Menard, 2001). All of the possible interaction terms were added to the model as well as the main effects. With four predictor variables there were possibilities of 4-way interactions, 3-way interactions, and 2-way interactions. The addition of interaction terms did not improve the predictive value of the model and none of the interaction terms were statistically significant. Therefore, none of interaction terms made a statistically significant contribution to the interpretation of the model. The strongest interaction observed was Autonomy and Control by Institutional Climate. The value of Exp(B) for this interaction was 1.065 with a weak effect of 7%.

Table 8
Logistic Regression Analysis of Faculty Participation in Online Teaching Predicted by
Perception of Influence. n=6,185

Predictor	β	*SE* β	Wald's X^2	df	p	e^{β} (odds ratio)
Constant	-1.332	.033	1672.297	1	.000	.246
Institutional Climate	.017	.031	.287	1	.592	1.017
Interest in Teaching	.375	.032	133.665	1	.000	1.455
Autonomy & Control	-.025	.032	.627	1	.429	.975
Institutional Reward	.378	.029	164.921	1	.000	1.460

Test	X^2	df	p
Overall model evaluation			
Likelihood ratio test	310.140	4	.000
Score test	318.610	4	.000
Goodness-of-fit test			
Hosmer & Lemeshow	4.024	8	.855

Note: SPSS binary logistic regression procedure. Cox and Snell R^2=.049, Nagelkerke R^2=.075.

In summary, the findings of this analysis were that faculty members are more likely teach online if they are interested in teaching and student-based pedagogical models, participate in workshops related to teaching, and receive rewards for integrating technology into their teaching. The Interest in Teaching factor included survey items related to student-centered pedagogical methods, participation in teaching enhancement workshops, and the personal importance of teaching to the respondent. The Institutional Reward factor included survey items related to incentives and rewards for using instructional technology.

Research Questions and Hypotheses

This study's research questions examined individual and contextual variables. Specifically, the five questions under investigation in the present study were:

  (a) To what extent does faculty interest in teaching predict participation in online teaching?

  (b) To what extent does faculty orientation toward student-centered instructional methods predict participation in online teaching?

(c) To what extent does perceived autonomy and control predict faculty participation in online teaching?

(d) To what extent does institutional climate predict faculty participation in online teaching?

(e) To what extent does institutional support predict faculty participation in online teaching?

Faculty interest in teaching and orientation toward student-centered instructional methods were statistically significant predictors for teaching online in the logistic regression analysis, but perceived autonomy and control and institutional climate were not. Institutional support, in the form of rewards for the use of instructional technology was also a statistically significant predictor for teaching online in the logistic regression analysis.

Two major subsets of hypotheses guided the analysis of data. The first hypothesis subset was that faculty interest in teaching and orientation toward student-centered pedagogy would be related to participation in online teaching. Faculty who reported a high degree of interest in teaching would tend to have greater participation in online teaching. Faculty who reported a high degree of involvement in student-centered pedagogy would tend to have greater participation in online teaching. These hypotheses were, in fact, supported by the results of this study. The second hypothesis subset was that factors related to institutional context would interact with interest in teaching and student-centered pedagogy, and that faculty interested in teaching and oriented toward student-centered pedagogy who experienced high levels of autonomy and control, institutional support, and a positive institutional climate would be more likely to participate in online teaching. The hypothesis that faculty who experience institutional support would be more likely to teach online was also supported by the results of this

study. The hypothesis that faculty who experience high levels of autonomy and control and a positive institutional climate would be more likely to participate in online teaching was not supported by the data in this study. Three of the five research hypotheses were supported. This study found statistically significant correlations between teaching importance, student-centered pedagogy, institutional reward, and the dependent variable, teaching online.

Summary

In this chapter, data from the 2010 Higher Education Research Institute Faculty survey was analyzed and used to assess the study's research questions and test the study's hypotheses. The analysis included examination of descriptive statistics, group differences, correlations for the variables, exploratory factor analysis to compute factors scores for the constructs of interest, and a logistic regression to test the predictive ability of those constructs. Chapter 5 presents a summary of the study, a discussion of the results, and conclusions about the findings. Recommendations for practice and future research are also given.

CHAPTER 5
SUMMARY, DISCUSSION, AND RECOMMENDATIONS

Summary of the Study

The purpose of this quantitative study was to examine the influence of individual factors and institutional context on faculty participation in online teaching at public institutions of higher learning. This chapter presents a summary of the study and its methodology, followed by a discussion of findings in the context of the study's theoretical framework and previous research. Conclusions and recommendations for additional research and future practice are presented.

The adoption of online distance learning by public institutions of higher education is growing more rapidly than faculty acceptance of this form of educational delivery (Allen & Seaman, 2013). A clear understanding of the extent to which intrinsic factors interact with institutional factors to predict participation in distance learning can inform campus leaders and policy makers in the development of distance learning education models. Faculty issues have not been given sufficient attention in research on distance learning, particularly research related to faculty motivation and the impact of institutional policies on that motivation (Wolcott, 2003). Little research has been done on the interaction between individual and institutional factors, and how institutional factors influence individual factors related to faculty participation in online teaching. That interaction is the focus of the present study.

Data Set

The sample for the present study came from the 2010-2011 Faculty Survey (*n*=45,177) administered by the Higher Education Research Institute (HERI) at the University of California, Los Angeles (UCLA). The survey questionnaire includes questions that pertain to a wide variety of faculty issues including faculty workload, professional development activities, teaching methods, workplace satisfaction, and institutional climate. Variables in the data set directly related to the areas of interest in the present study include individual and institutional factors identified in the literature as related to participation in online teaching. The independent variables include interest in teaching, use of student-centered pedagogical methods, perception of autonomy and control, instructional support, and institutional climate. The dependent variable is online teaching.

Method of Analysis

Data analysis included examination of data and descriptive statistics, examination of correlations for dependent and independent variables, comparison of group means, exploratory factor analysis, and logistic regression. The literature has established that intrinsic motivators, particularly concern for student learning and interest in high levels of student interaction, are the strongest motivators for faculty participation in online teaching (Dillon & Walsh, 1992; Maguire, 2005; Wolcott, 2003), so variables related to interest in teaching and to student-centered pedagogy were included. Because extrinsic factors related to institutional context may threaten faculty perceptions of autonomy, competence, and relatedness and act as barriers to growth and to the adoption of new processes (Labach, 2011; Maguire, 2009; Schifter, 2000), variables related to autonomy and control were also included in the analysis. Institutional support has been shown to be

a facilitator for faculty participation in online teaching (Gannon-Cook, 2003, Maguire, 2005), so variables related to faculty development and rewards for using instructional technology were also included. Exploratory factor analysis was employed to investigate the theoretical constructs represented by the items in the faculty questionnaire and to generate factor scores representing those constructs in the final analysis. Four constructs: Importance of Teaching, Autonomy and Control, Institutional Climate, and Reward, were retained and used in the logistic regression to test the study's hypotheses and to determine how well participation in distance learning was predicted by the independent faculty- and institution-related variables.

Summary of the Results

Faculty who reported teaching online were in the minority in the HERI sample, and examination of descriptive statistics for the data revealed that faculty at public institutions taught online at a higher rate (21.4%) than their peers at other institutions (16.9%). Academic demographic distributions similar for both groups were academic rank, tenure status, length of time at institution, and discipline. The majority of survey respondents were tenured or in tenure-track lines. The strongest correlations to teaching online were found in variables related to participation in teaching workshops and receiving incentives to integrate new technology. The exploratory factor analysis resulted in four factors that accounted for 58.66% of the variance in the solution. The rotated factor matrix for that solution was presented in Table 6 and had factor structure coefficients greater than |.50|.

To test the present study's research questions, a logistic regression was performed with the four retained factors: Institutional Climate, Interest in Teaching, Autonomy and Control, and Institutional Reward. The present study's five research questions included

both individual and contextual variables in order to improve understanding of the effects of individual factors and institutional context on the participation of faculty in online teaching. Those five questions were:

(a) To what extent does faculty interest in teaching predict participation in online teaching?

(b) To what extent does faculty orientation toward student-centered instructional methods predict participation in online teaching?

(c) To what extent does perceived autonomy and control predict faculty participation in online teaching?

(d) To what extent does institutional climate predict faculty participation in online teaching?

(e) To what extent does institutional support predict faculty participation in online teaching?

Faculty interest in teaching (a) and orientation toward student-centered instructional methods (b) were statistically significant ($p<.01$) predictors for teaching online. Survey items representing those variables were included in the Interest in Teaching factor, for which each one unit increase improved the odds that faculty had taught online by 45.5%. Perceived autonomy and control (c) and institutional climate (d) were not statistically significant in the model. Institutional support (e) was best represented in the final analysis by a factor named Institutional Reward, which included HERI survey items related to faculty receiving incentives and rewards for the use of instructional technology. Institutional Reward was statistically significant ($p<.01$) in predicting participation. Each one unit increase in reward increased the odds that faculty had taught online by 46%.

The hypothesis that factors related to institutional context would interact with interest in teaching and student-centered pedagogy – specifically that faculty interested in teaching and oriented toward student-centered pedagogy who experienced high levels of

autonomy and control, institutional support, and a positive institutional climate would be more likely to participate in online teaching – was not supported in the present study. An additional logistic regression with interaction effects did not improve the predictive value of the model, and none of the interaction terms were statistically significant, thus providing no evidence that institutional context can improve the likelihood that faculty who are interested in teaching will teach online. Results from the present study support the assertion that faculty members are more likely teach online if they are interested in teaching and student-based pedagogical models, have access to faculty development related to teaching enhancement, and receive rewards for integrating technology into their teaching.

Findings Related to Literature

The theoretical framework for the present study included a review of the growth of online learning, its impact on higher education, and literature related to organizational theory in higher education to aid in understanding the influence of organizational context. The literature review also connected change/innovation theory with literature related to faculty development and its role in change processes, motivation theories, and an examination of the current state of knowledge related to faculty participation in distance learning.

Organizational and Change Theory

Fear of change is often cited as a reason for non-participation in distance learning by faculty (Labach, 2011; Maguire, 2005; Mitchell & Geva-May, 2009; Parthasarathy & Smith, 2009; Wolcott, 2003) and change efforts in higher education are thought to be significantly influenced by organizational context, including structural characteristics, organizational culture, campus climate, support mechanisms and reward systems (Kezar,

2006; Kezar & Eckel, 2002; Merton, Froyd, Clark, & Richardson, 2009; Rogers, 2003; Tierney, 1988). Thus, research related to organizational and change theory, particularly as it relates to higher education, was utilized in the theoretical framework of the present study in order to explore the influence of organizational context on faculty participation in online teaching. It was assumed that the organizational context variables included in the present study – namely institutional climate, participation in faculty development, and reward structures – would have a significant influence on faculty participation in online teaching.

Reward structures.

The findings of the present study support the idea that reward structures and faculty development have an effect on faculty participation in teaching online, but negate earlier work suggesting that campus climate has an effect on faculty participation in teaching online. The Institutional Reward factor was a statistically significant predictor for online teaching. Faculty who received incentives and were rewarded for using instructional technology were more likely to teach online. The Institutional Climate factor did not have an effect on faculty participation in teaching online. This factor included variables related to faculty perceptions about tension with administrators, voice in decision-making, and adequacy of faculty support.

Reward structures have been found to enable change in higher education, (Kezar, 2006), but research on the effect of rewards on participation in online teaching has produced unclear results. Motivation theory suggests that behavior is a function of individual experience and whether a particular behavior has been rewarded or punished in the past (Stipek, 1996). Previous studies reported conflicting results in regard to the influence of rewards on faculty participation in teaching online. Several studies found

that faculty were not motivated by financial rewards and, in fact, that the use of financial incentives discouraged participation (Gannon-Cook, Ley, Crawford, & Warner, 2009; Schifter, 2000, 2005; Stipek, 1996; Tabata & Johnsrud, 2008; Wolcott & Betts, 1999). Other studies found financial reward to be a significant factor in faculty decisions to teach online (Simpson, 2010), proposing that later faculty adopters of an innovation are less enthusiastic than early adopters and may require extrinsic incentives (Gannon-Cook, 2003; Gannon-Cook, Ley, Crawford, & Warner, 2009). Rogers (2003) technology adoption lifecycle suggests that later adopters of an innovation have different motivations and may require different types of rewards to trial an innovation. Reward is a broad category that may include monetary stipends, equipment, release time, acknowledgment in the tenure and promotion process, or public recognition. Reward theory suggests that rewards can be perceived as informational or controlling (Deci, Connell, & Ryan, 1989), and that the type of reward impacts self-determination and motivation to participation an activity, which has ramifications for work-based rewards. The type of reward is meaningful; different types of rewards are likely to be interpreted differently by faculty, thus producing different effects. More research is needed on the type and amount of rewards that incentivize ongoing faculty participation in online teaching.

Institutional climate.

Tension between faculty and administrators has been cited as a barrier to change in higher education (Meyer & Rowan, 2006), and several earlier studies identified faculty fear of loss of autonomy as a barrier to participation in distance learning (Wolcott, 2003; Maguire, 2005; Dillon & Walsh, 1993; Labach, 2011; Maguire, 2005; Mitchell & Geva-May, 2009; Muilenburg & Berge, 2001; Schneckenberg, 2009; Wolcott, 2003). Therefore, it was a surprise in the present study that faculty perception of, and

satisfaction with, these institutional climate factors did not have a relationship with teaching online. Variables related to autonomy and control, the relationship between faculty and administrators, and adequacy of faculty development did not have an effect on participation in online teaching. The HERI survey items related to autonomy and control and institutional climate used in the present study were designed to measure general faculty perception at their institution, not faculty's perception of those constructs specifically in the context of online teaching, so it is possible that the contradictory finding here indicates a problem with the variable used to measure that construct. At a minimum, this refutation of earlier studies implies a need for additional research on the influence of perceived autonomy and control in the specific context of distance learning to determine whether the findings signal a shift in the influence of these factors on faculty decisions to participate in online teaching or were specific to this study.

Faculty development.

Faculty development is often specified as an enabler of change processes in higher education (Kezar & Eckel, 2002; McQuiggan, 2012). Faculty development supports change by providing structured activities and peer-networking opportunities that empower faculty participants to better understand an innovation, develop competencies, explore the value of the innovation for personal and student growth, and connect with colleagues with shared curiosity or interest (Furco & Moely, 2012; Sherer, Shea, & Kristensen, 2003). Previous research found that participation in faculty development motivated individuals to resolve uncertainty about the adoption of a new innovation (Rogers, 2003). In the present study, the adequacy of faculty development on campus did not have an effect on faculty participation in online teaching, but faculty participation in teaching enhancement workshops was a significant predictor for participation in online

teaching. This result is somewhat difficult to interpret and may mean that the amount of faculty development available was less important than the type of faculty development for predicting participation in online teaching. Further exploration of the nature and amount of faculty development that supports ongoing faculty participation in online teaching is recommended.

Intrinsic Factors and Motivation Theory

Motivation is a key element in producing maintained change (Ryan and Deci, 2000), and so research related to motivation theory was utilized in the theoretical framework of the present study in order to explore the influence of individual motivators on faculty participation in online teaching. Previous research provided strong evidence that intrinsic factors, particularly concern for student learning and interest in high levels of student interaction, are the strongest motivators for faculty toward online teaching (Dillon & Walsh, 1992; Maguire, 2005; Wolcott, 2003). It was assumed that the individual and intrinsic variables included in the present study – namely interest in teaching and orientation toward student-centered pedagogical methods – would have a significant influence on faculty participation in online teaching. The finding that Interest in Teaching was a statistically significant predictor for teaching online supported this hypothesis. Interest in Teaching was a composite variable that included faculty's self-reported importance of teaching, participation in teaching-related workshops, and the use of student-centered pedagogical techniques. Shea, Pickett, and Li (2005) previously reported that high levels of interaction with and between students was cited by faculty as a positive aspect of distance learning, and a significant influencer in faculty decisions to adopt or reject this innovation. That finding was confirmed by the present study, in which student-centered pedagogy was found to be a strong predictor for teaching online.

Cognitive motivation theory posits that decisions about participation in an activity are influenced by an individual's belief in their ability to perform a task (Wigfield & Eccles, 2000). In the present study, faculty who participated in teaching enhancement workshops were significantly more likely to teach online, supporting earlier research that that increased self-efficacy toward instructional skills and use of learning strategies can result in increased adoption of distance learning (Buchanan et al., 2013; Tabata & Johnsrud, 2008). Expectancy motivation theories connect the personal meaning of a situation to behavior and continued motivation, and add that sociocultural factors play a major role in determining task meaning (Maher, 1984). Particularly, an individual's social-cultural group influences whether or not it is acceptable or valued to perform in a certain area. Thus, consideration of socio-cultural group acceptance, for example, academic "tribes and territories" (Beyer, 1997), can explain variation by academic discipline in faculty participation in online teaching and attitudes toward distance learning (Graham & Jones, 2011; Shea, Pickett, & Li, 2005; Simpson, 2010). That variation by academic discipline was supported in the present study, which found participation in online teaching to be highest in the professional fields: Education (36%), Business (31%), and Other Professions (31%), which included health professions. Biological Science (8%), Physical Science (11%), and Arts and Humanities (15%) faculty reported much lower participation rates for online teaching. Further exploration of these differences and how they might connect to instructional strategies, reward structures, and faculty development preferred by particular disciplines is an area ripe for additional research.

Recommendations for Future Research

The model offered in Chapter 2 for understanding the factors that influence

faculty participation in online teaching (Figure 2) proposed that intrinsic factors motivate faculty toward online teaching and that intention can then be influenced by extrinsic factors. The present study provide evidence that interest in teaching and the development of self-efficacy through participation in teaching workshops have a positive effect on participation in online teaching, along with reward and institutional support. However, no evidence was found of interactions between individual and institutional factors. Future research that employs statistical tests capable of simultaneously measuring multiple units of analysis may be able to further investigate the question of whether extrinsic institutional factors have an effect on faculty motivation generated by intrinsic factors.

Reward was found to be a significant factor in predicting participation in online teaching in the present study, but earlier research produced conflicting results on its value. More research on the type and amount of rewards that incentivize ongoing faculty participation in online teaching should be undertaken, particularly qualitative studies that can delve more deeply into how faculty interpret and respond to rewards. Similarly, further exploration of the nature and amount of faculty development that supports ongoing faculty participation in online teaching is recommended. Too often, training efforts for faculty who will teach online substitute technical training for development focused on course redesign and effective online pedagogical strategies. A better understanding of the impact of technical and instructional self-efficacy on faculty participation in, and satisfaction with, online teaching is needed. Lastly, differences in the ways in which faculty from specific academic disciplines perceive and respond to instructional strategies, reward structures, and faculty development orientated toward increasing participation in online teaching is an area that has not been given sufficient attention.

Policy Recommendations and Conclusions

Although significant work remains to be done to fully understand how individual and institutional factors interact to influence faculty participation in online teaching, the present research study does provide practical implications for administrative policy and professional practice. Institutions of higher education should provide robust faculty development structures, with opportunities for faculty to engage in teaching enhancement workshops, experiment with student-centered pedagogical techniques, and develop efficacy in the use of online teaching and learning tools. These structures not only increase the likelihood that faculty will teach online, but may also provide a positive benefit to other modes of instructional delivery. Similarly, the use of recognition and reward mechanisms related to the adoption of innovative instructional strategies, whether online or in the classroom increases the likelihood of participation in online teaching and may provide other positive institutional benefits. These mechanisms should be developed with faculty input, to minimize the risk of structures that are perceived as controlling by faculty. Academic units and faculty development centers should encourage discussion of the intrinsic rewards experienced by faculty through increased interaction with students in online environments. Informal conversation in department meetings or during brown bag lunches can increase interest and participation in online teaching by showcasing success stories focused on the satisfaction and engagement for both faculty and students that is possible in the online environment,

This study examined the influence of intrinsic factors and institutional context on faculty decisions to participate in online teaching at public institutions of higher learning. Through an ex post facto design, cause and effect relationships were explored using statistical analysis of a large data set. The strongest predictors for teaching online were

found in variables related to participation in teaching workshops, receiving incentives to integrate new technology, and faculty interest in teaching. These results support the assertion that faculty members are more likely teach online if they are interested in teaching and student-based pedagogical models, have access to faculty development related to teaching enhancement, and receive rewards for integrating technology into their teaching.

Despite the widespread growth in recent years of online learning in public institutions of higher education, faculty acceptance of online learning lags behind institutional implementation (Allen & Seaman, 2013), and educational administrators report that engaging faculty in online pedagogy is a top challenge (Lokken & Mullins, 2014). Efforts to increase faculty involvement in, and satisfaction with, online teaching by educational administrators should focus energy and resources on developing faculty efficacy in student-centered instructional models and in reward structures that recognize and celebrate faculty involvement. As online learning continues to grow, students and faculty deserve the academy's best efforts to build models that support their engagement and success.

NOTE: The 2010-2011 HERI Faculty Survey is a web-based survey and therefore this document does not reflect the web-based formatting.

1. What is your principal activity in your current position at this institution?
    Administration
    Teaching
    Research
    Services to clients and patients
    Other

2. Are you considered a full-time employee of your institution for at least nine months of the current academic year?
    Yes   No

• •

PART-TIME FACULTY

These questions will only be included for part-time faculty.

2a. If given the choice, I would prefer to work full-time at this institution.
    Yes   No

2b. Have you ever sought a full-time teaching position at this or another institution?
    Yes   No

IF YES, NESTED ITEM
2bi. How long ago did you pursue a full-time position?
    Currently seeking a position
    Within the last year
    1 to 2 years ago
    3 to 5 years ago
    More than 5 years ago

2c. My full time professional career is outside academia.
    Yes   No

2d. In considering your reasons for teaching part-time at this institution, please indicate your agreement with the following statements:
    (Responses: Agree Strongly, Agree Somewhat, Disagree Somewhat, Disagree Strongly)
    My part-time position is an important source of income for me
    Compensation is not a major consideration in my decision to teach part-time
    Part-time teaching is a stepping-stone to a full-time position
    My part-time position provides benefits (e.g. health insurance, retirement, etc. that I need
    Teaching part-time fits my current lifestyle
    Full-time positions were not available
    My expertise in my chosen profession is relevant to the course(s) I teach

2e. Mark all institutional resources available to you in your last term as <u>part-time</u> faculty.
    (Responses: Yes, No)
    Use of private office
    Shared office space
    A personal computer
    An email account
    A phone/voicemail

2010-2011 HERI FACULTY SURVEY

2f. Please indicate your agreement with the following statements:
   (Responses: Agree Strongly, Agree Somewhat, Disagree Somewhat, Disagree Strongly)
   <u>Part-time instructors at this institution:</u>
      Are given specific training before teaching
      Rarely get hired into full-time positions
      Receive respect from students
      Are primarily responsible for introductory classes
      Have no guarantee of employment security
      Have access to support services
      Are compensated for advising/counseling students
      Are required to attend meetings
      Have good working relationships with the administration
      Are respected by full-time faculty

2g. Besides this institution, at how many other institutions do you teach (e.g., 0, 1, 2, 3, etc.)?

3. What is your present academic rank?
      Professor
      Associate Professor
      Assistant Professor
      Lecturer
      Instructor

4. What is your tenure status at this institution?
      Tenured
      On tenure track, but not tenured
      Not on tenure track, but institution has tenure system
      Institution has no tenure system

<u>COMMUNITY COLLEGE</u>

These questions will only be included for community colleges, and will replace questions 3 and 4 when the survey is used by community colleges.

3. What is your current status at this institution?
      Tenured
      Probationary, Tenure Track
      Renewable Contract Instructor (e.g., Adjunct)

4. What is your academic rank at this institution?
      Acting Instructor
      Instructor
      Assistant Professor
      Associate Professor
      Professor
      Emeritus

5. Are you currently serving in an administrative position as: (Mark <u>all</u> that apply)
        Department chair
        Dean (Associate or Assistant)
        President
        Vice-President
        Provost
        Other
        Not Applicable

6. On the following list, please mark <u>one</u> in each column:
        Highest Degree Earned
        Degree Currently Working On
                Bachelor's (B.A., B.S., etc.
                Master's (M.A., M.S., M.F.A., M.B.A., etc.
                LL.B., J.D.
                M.D., D.D.S. (or equivalent)
                Other first professional degree beyond B.A. (e.g., D.D., D.V.M.)
                Ed.D.
                Ph.D.
                Other degree
                None

7. From what higher education institution did you receive your Bachelor's Degree?
  (Please write-in complete Institution Name and City)
        Institution Name   _____
        City   _____
        State *(Drop down)*   _____
        Country *(Drop down)*   _____

8. From what higher education institution did you receive your highest degree?
  (Please write-in complete Institution Name and City)
        Institution Name   _____
        City   _____
        State *(Drop down)*   _____
        Country *(Drop down)*   _____

9. Personally, how important to you is:
        (Responses: Essential, Very Important, Somewhat Important, Not Important)
        Research
        Teaching
        Service

10. During the past two years, have you engaged in any of the following activities?
    (Responses: Yes, No)
    Taught an honors course
    Taught an interdisciplinary course
    Taught an ethnic studies course
    Taught a women's studies course
    Taught a service learning course
    Taught an exclusively web-based course at this institution
    Participated in a teaching enhancement workshop
    Advised student groups involved in service/volunteer work
    Collaborated with the local community in research/teaching
    Conducted research or writing focused on:
        International/global issues
        Racial or ethnic minorities
        Women and gender issues
    Engaged undergraduates on <u>your</u> research project
    Worked with undergraduates on a research project
    Engaged in academic research that spans multiple disciplines
    Taught a seminar for first-year students
    Taught a capstone course
    Taught in a learning community (e.g. FIG, linked courses)
    Supervised an undergraduate thesis
    Published op-ed pieces or editorials
    Received funding for your work from:
        Foundations
        State or federal government
        Business or industry

11. How many courses are you teaching this term (include all institutions at which you teach)? (e.g., 0, 1, 2, 3, etc.)

    IF response to question 11 is greater than or equal to one, populate 11a-11j based on response - NESTED
    11a – 11j <u>Course 1 (up to 10 courses)</u>
        i. Type of Course:
            General education course
            Course required for an undergraduate major
            Other undergraduate credit course
            Developmental/remedial course (not for credit)
            Non-credit course (other than above)
            Graduate course

        ii. How many students are enrolled in this course? _____

        iii. Does this course have a teaching/lab assistant or reader/grader assigned?
            Yes   No

        iv. Where do you teach this course?
            At this institution
            At another institution

    IF response to question 11 is 0 or Missing
    11k. What types of courses do you primarily teach?
        Undergraduate credit courses
        Graduate courses
        Non-credit courses
        I do not teach

12. Do you teach remedial/developmental skills in any of the following areas?
    (Responses: Yes, No)
    Reading
    Writing
    Mathematics
    ESL
    General academic skills
    Other subject areas

13. Have you engaged in any of the following professional development opportunities at your institution?
    (Responses: Yes, No, Not eligible, Not available)
    Paid workshops outside the institution focused on teaching
    Paid sabbatical leave
    Travel funds paid by the institution
    Internal grants for research
    Training for administrative leadership
    Received incentives to develop new courses
    Received incentives to integrate new technology into your classroom

14. How many of the following have you published?
    (Responses: None, 1-2, 3-4, 5-10, 11-20, 21-50, 51+)
    Articles in academic or professional journals
    Chapters in edited volumes
    Books, manuals, or monographs
    Other, such as patents, or computer software products

15. How many exhibitions or performances in the fine or applied arts have you presented in the last two years?
    (Responses: None, 1-2, 3-4, 5-10, 11-20, 21-50, 51+)

16. How many of your professional writings have been published or accepted for publication in the last two years?
    (Responses: None, 1-2, 3-4, 5-10, 11-20, 21-50, 51+)

17. Please indicate the extent to which you:
    (Responses: To a Great Extent, To Some Extent, Not at All)
    Feel that the training you received in graduate school prepared you well for your role as a faculty member
    Achieve a healthy balance between your personal life and your professional life
    Experience close alignment between your work and your personal values
    Feel that you have to work harder than your colleagues to be perceived as a legitimate scholar
    Mentor new faculty

18. In your interactions with undergraduates, how often do you encourage them to:
    (Responses: Frequently, Occasionally, Not at all)
    Ask questions in class
    Support their opinions with a logical argument
    Seek solutions to problems and explain them to others
    Revise their papers to improve their writing
    Evaluate the quality or reliability of information they receive
    Take risks for potential gains
    Seek alternative solutions to a problem
    Look up scientific research articles and resources
    Explore topics on their own, even though it was not required for a class
    Accept mistakes as part of the learning process
    Seek feedback on their academic work
    Integrate skills and knowledge from different sources and experiences

19. In how many of the courses that you teach do you use each of the following?
(Responses: All, Most, Some, None)

Evaluation Methods

Multiple-choice exams
Essay exams
Short-answer exams
Quizzes
Weekly essay assignments
Student presentations
Term/research papers
Student evaluations of each others' work
Grading on a curve
Competency-based grading

Instructional Techniques/Methods

Class discussions
Cooperative learning (small groups)
Experiential learning/Field studies
Teaching assistants
Recitals/Demonstrations
Group projects
Extensive lecturing
Multiple drafts of written work
Student-selected topics for course content
Reflective writing/journaling
Community service as part of coursework
Electronic quizzes with immediate feedback in class
Using real-life problems
Using student inquiry to drive learning

20. Indicate the importance to you personally of each of the following:
(Responses: Essential, Very Important, Somewhat Important, Not Important)

Becoming an authority in my field
Influencing the political structure
Influencing social values
Raising a family
Becoming very well off financially
Helping others who are in difficulty
Adopting 'green' practices to protect the environment
Developing a meaningful philosophy of life
Helping to promote racial understanding
Integrating spirituality into my life
Making a theoretical contribution to science
Participating in a community action program
Keeping up to date with political affairs
Becoming a community leader
Mentoring the next generation of scholars

21. Indicate the importance to you of each of the following education goals for undergraduate students:
    (Responses: Essential, Very Important, Somewhat Important, Not important)
    Develop ability to think critically
    Prepare students for employment after college
    Prepare students for graduate or advanced education
    Develop moral character
    Provide for students' emotional development
    Teach students the classic works of Western civilization
    Help students develop personal values
    Enhance students' self-understanding
    Instill in students a commitment to community service
    Enhance students' knowledge of and appreciation for other racial/ethnic groups
    Help master knowledge in a discipline
    Develop creative capacities
    Instill a basic appreciation of the liberal arts
    Promote ability to write effectively
    Help students evaluate the quality and reliability of information
    Engage students in civil discourse around controversial issues
    Teach students tolerance and respect for different beliefs
    Encourage students to become agents of social change

22. During the present term, how many hours per week on average do you actually spend on each of the following activities?
    (Responses: None, 1-4, 5-8, 9-12, 13-16, 17-20, 21-34, 35-44, 45+)
    Scheduled teaching (give actual, not credit hours)
    Preparing for teaching (including reading student papers and grading)
    Advising and counseling of students
    Committee work and meetings
    Other administration
    Research and scholarly writing
    Other creative products/performances
    Consultation with clients/patients
    Community or public service
    Outside consulting/freelance work
    Household/childcare duties
    Commuting to campus
    Other employment, outside of academia

23. For each of the following items, please mark either Yes or No.
    (Responses: Yes, No)
    Are you a member of a faculty union?
    Are you a U.S. citizen?
    Do you plan to retire within the next three years?
    Do you use your scholarship to address local community needs?
    Have you been sexually harassed at this institution?
    Have you ever interrupted your professional career for more than one year for family reasons?
    Have you ever received an award for outstanding teaching?
    Is (or was) your spouse/partner an academic?

24. During the past two years, have you:
    (Responses: Yes, No)
    Considered early retirement?
    Considered leaving academe for another job?
    Considered leaving this institution for another?
    Changed academic institutions?
    Engaged in paid consulting outside of your institution?
    Engaged in public service/professional consulting without pay?
    Received at least one firm job offer?
    Requested/sought an early promotion?

25. If you were to begin your career again, would you:
    (Responses: Definitely yes, Probably yes, Not sure, Probably no, Definitely no)
    Still want to come to this institution?
    Still want to be a college professor?

26. Indicate how well each of the following describes your college or university:
    (Responses: Very Descriptive, Somewhat Descriptive, Not Descriptive)
    It is easy for students to see faculty outside of regular office hours
    The faculty are typically at odds with campus administration
    Faculty here respect each other
    Most students are treated like "numbers in a book"
    Faculty are rewarded for being good teachers
    There is respect for the expression of diverse values and beliefs
    Faculty are rewarded for their efforts to use instructional technology
    Administrators consider faculty concerns when making policy
    The administration is open about its policies

27. Please indicate the extent to which each of the following has been a source of stress for you during the last two years:
    (Responses: Extensive, Somewhat, Not at All, Not Applicable)
    Managing household responsibilities
    Child care
    Care of elderly parent
    My physical health
    Health of spouse/partner
    Review/promotion process
    Subtle discrimination (e.g., prejudice, racism, sexism)
    Personal finances
    Committee work
    Faculty meetings
    Colleagues
    Students
    Research or publishing demands
    Institutional procedures and "red tape"
    Teaching load
    Children's problems
    Friction with spouse/partner
    Lack of personal time
    Keeping up with information technology
    Job security
    Being part of a dual career couple
    Working with underprepared students
    Self-imposed high expectations
    Change in work responsibilities
    Institutional budget cuts

28. How satisfied are you with the following aspects of your job?
    (Responses: Very Satisfied, Satisfied, Marginally Satisfied, Not Satisfied, Not Applicable)
    Salary
    Health benefits
    Retirement benefits
    Opportunity for scholarly pursuits
    Teaching load
    Quality of students
    Office/lab space
    Autonomy and independence
    Professional relationships with other faculty
    Social relationships with other faculty
    Competency of colleagues
    Job security
    Departmental leadership
    Course assignments
    Freedom to determine course content
    Availability of child care at this institution
    Prospects for career advancement
    Clerical/administrative support
    Overall job satisfaction
    Tuition remission for your children/dependents

29. Below are some statements about your college or university. Indicate the extent to which you agree or disagree with
    each of the following:
    (Responses: Agree Strongly, Agree Somewhat, Disagree Somewhat, Disagree Strongly)
    Faculty are interested in students' personal problems
    Racial and ethnic diversity should be more strongly reflected in the curriculum
    Faculty feel that most students are well-prepared academically
    This institution should hire more faculty of color
    This institution should hire more women faculty
    Student Affairs staff have the support and respect of faculty
    Faculty are committed to the welfare of this institution
    Faculty here are strongly interested in the academic problems of undergraduates
    There is a lot of campus racial conflict here
    My research is valued by faculty in my department
    My teaching is valued by faculty in my department
    Faculty of color are treated fairly here
    Women faculty are treated fairly here
    Gay and lesbian faculty are treated fairly here
    Faculty are sufficiently involved in campus decision making
    My values are congruent with the dominant institutional values
    This institution takes responsibility for educating underprepared students
    The criteria for advancement and promotion decisions are clear
    Most of the students I teach lack the basic skills for college level work
    There is adequate support for faculty development

30. Indicate how important you believe each priority listed below is at your college or university:
    (Responses: Highest Priority, High Priority, Medium Priority, Low Priority)
    To promote the intellectual development of students
    To develop a sense of community among students and faculty
    To facilitate student involvement in community service
    To help students learn how to bring about change in society
    To increase or maintain institutional prestige
    To hire faculty "stars"
    To recruit more minority students
    To enhance the institution's national image
    To create a diverse multi-cultural campus environment
    To promote gender equity among faculty
    To provide resources for faculty to engage in community-based teaching or research
    To create and sustain partnerships with surrounding communities
    To pursue extramural funding
    To increase the representation of minorities in the faculty and administration
    To strengthen links with the for-profit, corporate sector
    To develop leadership ability among students
    To increase the representation of women in the faculty and administration
    To develop an appreciation for multiculturalism

31. Please indicate your agreement with each of the following statements:
    (Responses: Agree Strongly, Agree Somewhat, Disagree Somewhat, Disagree Strongly)
    The chief benefit of a college education is that it increases one's earning power
    Promoting diversity leads to the admission of too many underprepared students
    Colleges should be actively involved in solving social problems
    Colleges should encourage students to be involved in community service activities
    A racially/ethnically diverse student body enhances the educational experience of all students
    Realistically, an individual can do little to bring about changes in society
    Colleges should be concerned with facilitating undergraduate students' spiritual development
    Colleges have a responsibility to work with their surrounding communities to address local issues
    Private funding sources often prevent researchers from being completely objective in the conduct of their work
    Colleges should prohibit racist/sexist speech on campus
    This institution should not offer remedial/developmental education

32. Please enter your base institutional salary (e.g., for $56,000, please enter 56000).
    $_____

33. Your base institutional salary reported above is based on:
    Less than 9 months
    9/10 months
    11/12 months

- -

<u>PART-TIME FACULTY</u>
These questions will replace questions 32 and 33 for faculty who indicate they are part-time.

32. Please enter your total salary from teaching at this institution for this academic year (e.g., for $30,000, please enter 30000).
    $_____

33. How much are you paid per course at this institution (e.g., for $3,000, please enter 3000)?
    $_____

- -

34. What percentage of your current year's income comes from:

(e.g., for 45%, please enter 45 - total for all responses must equal 100%)

Base salary from this institution	____%
Other income from this institution	____%
Income from another academic institution	____%
Non-academic income	____%

35. Please enter the four-digit year that each of the following occurred (e.g., 1944, 2001, etc.).

Year of birth	____
Year of highest degree now held	____
Year of appointment at present institution	____
If tenured, year tenure was awarded	____

36. Please select the most appropriate general area and disciplinary field for the following:
    (See Appendix A)

Major of highest degree held	____
Department of current faculty appointment	____

37. How many children do you have in the following age ranges?
    (Responses: 0, 1, 2, 3, 4+)
    Under 18 years old
    18 years or older

38. How would you characterize your political views?
    Far Left
    Liberal
    Middle of the Road
    Conservative
    Far Right

39. Are you currently:
    Single
    Married
    Unmarried, living with partner
    Divorced
    Widowed
    Separated

40. Your sex:
    Male
    Female

41. Is English your native language?
    Yes   No

42. Are you: (Mark all that apply)
    White/Caucasian
    African American/Black
    American Indian/Alaska Native
    Asian American/Asian
    Native Hawaiian/Pacific Islander
    Mexican American/Chicano
    Puerto Rican
    Other Latino
    Other

43. Do you give the Higher Education Research Institute (HERI) permission to retain your contact information (i.e., your email address and name) for possible follow-up research? HERI maintains strict standards of confidentiality and will not release your identifying information.

       Yes   No

       If "Yes," please confirm your email address: _____

44 to 63. Local Optional Questions (20 total)
(Responses: A, B, C, D, E)

APPENDIX A

General Area
(Major / Department)

1=Agriculture/natural resources/related	17=Library science
2=Architecture and related services	18=Mathematics and statistics
3=Area/ethnic/cultural/gender studies	19=Mechanical/repair technologies/techs
4=Arts (visual and performing)	20=Multi/interdisciplinary studies
5=Biological and biomedical sciences	21=Parks/recreation/leisure/fitness studies
6=Business/management/marketing/related	22=Precision production
7=Communication/journalism/ comm. tech	23=Personal and culinary services
8=Computer/info sciences/support tech	24=Philosophy, religion & theology
9=Construction trades	25=Physical sciences
10=Education	26=Psychology
11=Engineering technologies/technicians	27=Public administration/social services
12=English language and literature/letters	28=Science technologies/technicians
13=Family/consumer sciences, human sciences	29=Security & protective services
14=Foreign languages/literature/linguistics	30=Social sciences (except psych) and history
15=Health professions/clinical sciences	31=Transportation & materials moving
16=Legal professions and studies	32=Other

Specific Discipline
(Major / Department)

0101=Agriculture and related sciences
0102=Natural resources and conservation

0201=Architecture and related services

0301=Area/ethnic/cultural/gender studies

0401=Art history, criticism, and conservation
0402=Design & applied arts
0403=Drama/theatre arts and stagecraft
0404=Fine and studio art
0405=Music, general
0406=Music history, literature, and theory
0407=Visual and performing arts, other
0409=Dance
0410=Film, video, and photographic arts

0501=Biochem/biophysics/molecular biology
0502=Botany/plant biology
0503=Genetics
0504=Microbiological sciences & immunology
0505=Physiology, pathology & related sciences
0506=Zoology/animal biology
0507=Biological & biomedical sciences, other

0601=Accounting and related services
0602=Business admin/management/operations
0603=Business operations support/assistance
0604=Finance/financial management services
0605=Human resources management and svcs
0606=Marketing
0607=Business/mgt/marketing/related, other
0608=Management information systems/services

0701=Communication/journalism/related prms
0702=Communication technologies/technicians and support svcs

0801=Computer/info tech administration/mgmt
0802=Computer programming
0803=Computer science
0804=Computer software and media applications
0805=Computer systems analysis
0806=Computer systems networking/telecom
0807=Data entry/microcomputer applications
0808=Data processing
0809=Information science/studies
0810=Computer/info sci/support svcs, other

0901=Construction trades

1001=Curriculum and instruction
1002=Educational administration/supervision
1003=Educational/instructional media design
1004=Special education and teaching
1005=Student counseling/personnel services
1006=Education, other
1007=Early childhood education and teaching
1008=Elementary education and teaching
1009=Secondary education and teaching
1010=Adult and continuing education/teaching
1011=Teacher ed: specific levels, other
1012=Teacher ed: specific subject areas
1013=Bilingual & multicultural education
1014=Ed assessment
1015=Higher education

2301=Culinary arts and related services

2302=Personal and culinary services

1101=Biomedical/medical engineering
1102=Chemical engineering
1103=Civil engineering
1104=Computer engineering
1105=Electrical/electronics/comms engineering
1106=Engineering technologies/technicians
1107=Environmental/environmental health eng
1108=Mechanical engineering
1109=Engineering, other

1201=English language and literature/letters

1301=Family/consumer sciences, human sciences

1401=Foreign languages/literature/linguistics

1501=Alternative/complementary medicine/sys
1502=Chiropractic
1503=Clinical/medical lab science/allied
1504=Dental support services/allied
1505=Dentistry
1506=Health & medical administrative services
1507=Allied health and medical assisting services
1508=Allied health diagnostic, intervention, treatment professions
1509=Medicine, including psychiatry
1510=Mental/social health services and allied
1511=Nursing
1512=Optometry
1513=Osteopathic medicine/osteopathy
1514=Pharmacy/pharmaceutical sciences/admin
1515=Podiatric medicine/podiatry
1516=Public health
1517=Rehabilitation & therapeutic professions
1518=Veterinary medicine
1519=Health/related clinical services, other

1601=Law
1602=Legal support services
1603=Legal professions and studies, other

1701=Library science

1801=Mathematics
1802=Statistics

1901=Mechanical/repair technologies/techs

2001=Multi/interdisciplinary studies

2101=Parks, recreation and leisure studies
2102=Health and physical education/fitness

2201=Precision production

2401=Philosophy
2402=Religion/religious studies
2403=Theology and religious vocations

2501=Astronomy & astrophysics
2502=Atmospheric sciences and meteorology
2503=Chemistry
2504=Geological & earth sciences/geosciences
2505=Physics
2506=Physical sciences, other

2601=Behavioral psychology
2602=Clinical psychology
2603=Education/school psychology
2604=Psychology, other

2701=Public administration
2702=Social work
2703=Public administration & social svcs other

2801=Science technologies/technicians

2901=Corrections
2902=Criminal justice
2903=Fire protection
2904=Police science
2905=Security and protective services, other

3001=Anthropology (except psychology)
3002=Archeology
3003=Criminology
3004=Demography & population studies
3005=Economics
3006=Geography & cartography
3007=History
3008=International relations & affairs
3009=Political science and government
3010=Sociology
3011=Urban studies/affairs
3012=Social sciences, other

3101=Transportation and materials moving

3201=Other

Appendix B: HERI Faculty Survey Codebook

Variable Name	Variable Description
ACE	College I.D.
SUBJID	Subject I.D.
PRINACT	What is your principal activity in your current position at this institution? 1=Administration 2=Teaching 3=Research 4=Services to clients and patients 5=Other
FULLSTAT	Are you considered a full-time employee of your institution for at least nine months of the current academic year? 1=No 2=Yes
Part-time Faculty Module	
FULLPREF	If given the choice, I would prefer to work full-time at this institution. 1=No 2=Yes
PTWORKFT	Have you ever sought a full-time teaching position at this or another institution? 1=No 2=Yes
PTSEEK	If PTWORKFT='Yes'. How long ago did you pursue a full-time position? 1=Currently seeking a position 2=Within the last year 3=1 to 2 years ago 4=3 to 5 years ago 5=More than 5 years ago
PTCAREER	PT: My full time professional career is outside academia. 1=No 2=Yes
	In considering your reasons for teaching part-time at this institution, please indicate your agreement with the following statements: 1=Disagree strongly 2=Disagree somewhat 3=Agree somewhat 4=Agree strongly
PTREASON01	PT Reason: My part-time position is an important source of income for me
PTREASON02	PT Reason: Compensation is not a major consideration in my decision to teach part-time
PTREASON03	PT Reason: Part-time teaching is a stepping-stone to a full-time position
PTREASON04	PT Reason: My part-time position provides benefits (e.g. health insurance, retirement, etc. that I need
PTREASON05	PT Reason: Teaching part-time fits my current lifestyle
PTREASON06	PT Reason: Full-time positions were not available
PTREASON07	PT Reason: My expertise in my chosen profession is relevant to the course(s) I teach
	Mark all institutional resources available to you in your last term as part-time faculty 1=Not marked 2=Marked
PTRESOURCES01	PT Resources: Use of private office
PTRESOURCES02	PT Resources: Shared office space
PTRESOURCES03	PT Resources: A personal computer
PTRESOURCES04	PT Resources: An email account
PTRESOURCES05	PT Resources: A phone/voicemail

Variable Name	Variable Description
	Please indicate your agreement with the following statements: 　1=Disagree strongly 　2=Disagree somewhat 　3=Agree somewhat 　4=Agree strongly Part-time instructors at this institution:
PTOPN01	PT Opinion: Are given specific training before teaching
PTOPN02	PT Opinion: Rarely get hired into full-time positions
PTOPN03	PT Opinion: Receive respect from students
PTOPN04	PT Opinion: Are primarily responsible for introductory classes
PTOPN05	PT Opinion: Have no guarantee of employment security
PTOPN06	PT Opinion: Have access to support services
PTOPN07	PT Opinion: Are compensated for advising/counseling students
PTOPN08	PT Opinion: Are required to attend meetings
PTOPN09	PT Opinion: Have good workshop relationships with the administration
PTOPN10	PT Opinion: Are respected by full-time faculty
PTTEACH	Besides this institution, at how many other institutions do you teach ? (10 maximum)
End	
ACADRANK	What is your present academic rank? 　1=Professor 　2=Associate Professor 　3=Assistant Professor 　4=Lecturer 　5=Instructor
TENURE	What is your tenure status at this institution? 　1=Tenured 　2=On tenure track, but not tenured 　3=Not on tenure track, but institution has tenure system 　4=Institution has no tenure system
Community College Module	
CCSTATUS	What is your current status at this institution? 　1=Tenured 　2=Probationary, Tenure Track 　3=Renewable Contract Instructor (e.g. Adjunct)
CCRANK	What is your academic rank at this institution? 　1=Acting Instructor 　2=Instructor 　3=Assistant Professor 　4=Associate Professor 　5=Professor 　6=Emeritus
End	

Variable Name	Variable Description
	Are you currently serving in an administrative position as: 　1=Not marked 　2=Marked
ADMCHAIR	Department chair
ADMDEAN	Dean (Associate or Assistant)
ADMPRES	President
ADMVP	Vice-President
ADMPROVOST	Provost
ADMOTHER	Other
ADMNA	Not Applicable
DEGEARN	Highest degree earned
DEGWORK	Degree currently working on 　1=Bachelor's degree (B.A., B.S., etc.) 　2=Master's degree (M.A., M.S., etc.) 　3=LL.B.,J.D. 　4=M.D., D.D.S., (or equivalent) 　5=Other first professional degree beyond B.A. (e.g., D.D., D.V.M.) 　6=Ed.D. 　7=Ph.D. 　8=Other degree 　9=None
	Personally, how important to you is: 　1=Not important 　2=Somewhat important 　3=Very important 　4=Essential
IMPTRTS1	Importance: Research
IMPTRTS2	Importance: Teaching
IMPTRTS3	Importance: Service
	During the past two years, have you engaged in any of the following activities? 　1=No 　2=Yes
TCHACT01	Activity: Taught an honors course
TCHACT02	Activity: Taught an interdisciplinary course
TCHACT03	Activity: Taught an ethnic studies course
TCHACT04	Activity: Taught a women's studies course
TCHACT05	Activity: Taught a service learning course
TCHACT06	Activity: Taught an exclusively web-based course at this institution
TCHACT07	Activity: Participated in a teaching enhancement workshop
TCHACT08	Activity: Advised student groups involved in service/volunteer work
TCHACT09	Activity: Collaborated with the local community in research/teaching
TCHACT10	Activity: Conducted research or writing focused on - International/global issues
TCHACT11	Activity: Conducted research or writing focused on - Racial or ethnic minorities
TCHACT12	Activity: Conducted research or writing focused on - Women and gender issues
TCHACT13	Activity: Engaged undergraduates on your research project
TCHACT14	Activity: Worked with undergraduates on a research project
TCHACT15	Activity: Engaged in academic research that spans multiple disciplines
TCHACT16	Activity: Taught a seminar for first-year students
TCHACT17	Activity: Taught a capstone course
TCHACT18	Activity: Taught in a learning community (e.g. FIG, linked courses)
TCHACT19	Activity: Supervised an undergraduate thesis
TCHACT20	Activity: Published op-ed pieces or editorials
TCHACT21	Activity: Received funding for your work from - Foundations
TCHACT22	Activity: Received funding for your work from - State or federal government
TCHACT23	Activity: Received funding for your work from - Business or industry
COURSENUM	How many courses are you teaching this term (include all institutions at which you teach)? (20 maximum)

Variable Name	Variable Description
Course Information (based on response to COURSENUM > 1)	
CRSTYPE01	Course 1 - Type of Course: 1=General education course 2=Course required for an undergraduate major 3=Other undergraduate credit course 4=Developmental/remedial course (not for credit) 5=Non-credit course (other than above) 6=Graduate course
CRSENROLL01	Course 1 - How many students are enrolled in this course? (2,000 maximum)
CRSASST01	Course 1 - Does this course have a teaching/lab assistant or reader/grader assigned? 1=No 2=Yes
CRSPLACE01	Course 1 - Where do you teach this course? 1=At this institution 2=At another institution
CRSTYPE02 CRSENROLL02 CRSASST02 CRSPLACE02	CRSTYPE02: Course 2 - Type of Course: CRSENROLL02: Course 2 - How many students are enrolled in this course? CRSASST02: Course 2 - Does this course have a teaching/lab assistant or reader/grader assigned? CRSPLACE02: Course 2 - Where do you teach this course?
CRSTYPE03 CRSENROLL03 CRSASST03 CRSPLACE03	CRSTYPE03: Course 3 - Type of Course: CRSENROLL03: Course 3 - How many students are enrolled in this course? CRSASST03: Course 3 - Does this course have a teaching/lab assistant or reader/grader assigned? CRSPLACE03: Course 3 - Where do you teach this course?
CRSTYPE04 CRSENROLL04 CRSASST04 CRSPLACE04	CRSTYPE04: Course 4 - Type of Course: CRSENROLL04: Course 4 - How many students are enrolled in this course? CRSASST04: Course 4 - Does this course have a teaching/lab assistant or reader/grader assigned? CRSPLACE04: Course 4 - Where do you teach this course?
CRSTYPE05 CRSENROLL05 CRSASST05 CRSPLACE05	CRSTYPE05: Course 5 - Type of Course: CRSENROLL05: Course 5 - How many students are enrolled in this course? CRSASST05: Course 5 - Does this course have a teaching/lab assistant or reader/grader assigned? CRSPLACE05: Course 5 - Where do you teach this course?
CRSTYPE06 CRSENROLL06 CRSASST06 CRSPLACE06	CRSTYPE06: Course 6 - Type of Course: CRSENROLL06: Course 6 - How many students are enrolled in this course? CRSASST06: Course 6 - Does this course have a teaching/lab assistant or reader/grader assigned? CRSPLACE06: Course 6 - Where do you teach this course?
CRSTYPE07 CRSENROLL07 CRSASST07 CRSPLACE07	CRSTYPE07: Course 7 - Type of Course: CRSENROLL07: Course 7 - How many students are enrolled in this course? CRSASST07: Course 7 - Does this course have a teaching/lab assistant or reader/grader assigned? CRSPLACE07: Course 7 - Where do you teach this course?
CRSTYPE08 CRSENROLL08 CRSASST08 CRSPLACE08	CRSTYPE08: Course 8 - Type of Course: CRSENROLL08: Course 8 - How many students are enrolled in this course? CRSASST08: Course 8 - Does this course have a teaching/lab assistant or reader/grader assigned? CRSPLACE08: Course 8 - Where do you teach this course?
CRSTYPE09 CRSENROLL09 CRSASST09 CRSPLACE09	CRSTYPE09: Course 9 - Type of Course: CRSENROLL09: Course 9 - How many students are enrolled in this course? CRSASST09: Course 9 - Does this course have a teaching/lab assistant or reader/grader assigned? CRSPLACE09: Course 9 - Where do you teach this course?
CRSTYPE10 CRSENROLL10 CRSASST10 CRSPLACE10	CRSTYPE10: Course 10 - Type of Course: CRSENROLL10: Course 10 - How many students are enrolled in this course? CRSASST10: Course 10 - Does this course have a teaching/lab assistant or reader/grader assigned? CRSPLACE10: Course 10 - Where do you teach this course?
Course Information (based on response to COURSENUM=0 or blank)	
PRIMARYTEACH	What types of courses do you primarily teach? 1=Undergraduate credit courses 2=Graduate courses 3=Non-credit courses 4=I do not teach

Variable Name	Variable Description
	Do you teach remedial/developmental skills in any of the following areas?
	1=Not marked
	2=Marked
REMEDIAL01	Remedial: Reading
REMEDIAL02	Remedial: Writing
REMEDIAL03	Remedial: Mathematics
REMEDIAL04	Remedial: ESL
REMEDIAL05	Remedial: General academic skills
REMEDIAL06	Remedial: Other subject areas
	Have you engaged in any of the following professional development opportunities at your institution?
	1=Not available
	2=Not eligible
	3=No
	4=Yes
PROFDEV01	Prof Develop: Paid workshops outside the institution focused on teaching
PROFDEV02	Prof Develop: Paid sabbatical leave
PROFDEV03	Prof Develop: Travel funds paid by the institution
PROFDEV04	Prof Develop: Internal grants for research
PROFDEV05	Prof Develop: Training for administrative leadership
PROFDEV06	Prof Develop: Received incentives to develop new courses
PROFDEV07	Prof Develop: Received incentives to integrate new technology into your classroom
	How many of the following have you published?
	1=None
	2=1-2
	3=3-4
	4=5-10
	5=11-20
	6=21-50
	7=51+
PUBLISH01	Publish: Articles in academic or professional journals
PUBLISH02	Publish: Chapters in edited volumes
PUBLISH03	Publish: Books, manuals, or monographs
PUBLISH04	Publish: Other, such as patents, or computer software products
PUBLISH05	Publish: How many exhibitions or performances in the fine or applied arts have you presented in the last two years?
PUBLISH06	Publish: How many of your professional writings have been published or accepted for publication in the last two years?
	Please indicate the extent to which you:
	1=Not at all
	2=To some extent
	3=To a great extent
AFFACT01	Affect: Feel that the training you received in graduate school prepared you well for your role as a faculty member
AFFACT02	Affect: Achieve a healthy balance between your personal life and your professional life
AFFACT03	Affect: Experience close alignment between your work and your personal values
AFFACT04	Affect: Feel that you have to work harder than your colleagues to be perceived as a legitimate scholar
AFFACT05	Affect: Mentor new faculty
	In your interactions with undergraduates, how often do you encourage them to:
	1=Not at all
	2=Occasionally
	3=Frequently
MNDHAB01	Habits of Mind: Ask questions in class
MNDHAB02	Habits of Mind: Support their opinions with a logical argument
MNDHAB03	Habits of Mind: Seek solutions to problems and explain them to others
MNDHAB04	Habits of Mind: Revise their papers to improve their writing
MNDHAB05	Habits of Mind: Evaluate the quality or reliability of information they receive
MNDHAB06	Habits of Mind: Take risks for potential gains
MNDHAB07	Habits of Mind: Seek alternative solutions to a problem
MNDHAB08	Habits of Mind: Look up scientific research articles and resources
MNDHAB09	Habits of Mind: Explore topics on their own, even though it was not required for a class
MNDHAB10	Habits of Mind: Accept mistakes as part of the learning process
MNDHAB11	Habits of Mind: Seek feedback on their academic work
MNDHAB12	Habits of Mind: Integrate skills and knowledge from different sources and experiences

Variable Name	Variable Description
	In how many of the undergraduate courses that you teach do you use each of the following?
	1=None
	2=Some
	3=Most
	4=All
EVALMETHOD01	Evaluation Method: Multiple-choice exams
EVALMETHOD02	Evaluation Method: Essay exams
EVALMETHOD03	Evaluation Method: Short-answer exams
EVALMETHOD04	Evaluation Method: Quizzes
EVALMETHOD05	Evaluation Method: Weekly essay assignments
EVALMETHOD06	Evaluation Method: Student presentations
EVALMETHOD07	Evaluation Method: Term/research papers
EVALMETHOD08	Evaluation Method: Student evaluations of each others' work
EVALMETHOD09	Evaluation Method: Grading on a curve
EVALMETHOD10	Evaluation Method: Competency-based grading
INSTMETHOD01	Instructional Method: Class discussions
INSTMETHOD02	Instructional Method: Cooperative learning (small groups)
INSTMETHOD03	Instructional Method: Experiential learning/Field studies
INSTMETHOD04	Instructional Method: Teaching assistants
INSTMETHOD05	Instructional Method: Recitals/Demonstrations
INSTMETHOD06	Instructional Method: Group projects
INSTMETHOD07	Instructional Method: Extensive lecturing
INSTMETHOD08	Instructional Method: Multiple drafts of written work
INSTMETHOD09	Instructional Method: Student-selected topics for course content
INSTMETHOD10	Instructional Method: Reflective writing/journaling
INSTMETHOD11	Instructional Method: Community service as part of coursework
INSTMETHOD12	Instructional Method: Electronic quizzes with immediate feedback in class
INSTMETHOD13	Instructional Method: Using real-life problems
INSTMETHOD14	Instructional Method: Using student inquiry to drive learning
	Indicate the importance to you personally of each of the following:
	1=Not important
	2=Somewhat important
	3=Very important
	4=Essential
OBJ01	Objective: Becoming an authority in my field
OBJ02	Objective: Influencing the political structure
OBJ03	Objective: Influencing social values
OBJ04	Objective: Raising a family
OBJ05	Objective: Becoming very well off financially
OBJ06	Objective: Helping others who are in difficulty
OBJ07	Objective: Adopting 'green' practices to protect the environment
OBJ08	Objective: Developing a meaningful philosophy of life
OBJ09	Objective: Helping to promote racial understanding
OBJ10	Objective: Integrating spirituality into my life
OBJ11	Objective: Making a theoretical contribution to science
OBJ12	Objective: Participating in a community action program
OBJ13	Objective: Keeping up to date with political affairs
OBJ14	Objective: Becoming a community leader
OBJ15	Objective: Mentoring the next generation of scholars

Variable Name	Variable Description
	Indicate the importance to you of each of the following education goals for undergraduate students: 　1=Not important 　2=Somewhat important 　3=Very important 　4=Essential
UGGOAL01	UG Goal: Develop ability to think critically
UGGOAL02	UG Goal: Prepare students for employment after college
UGGOAL03	UG Goal: Prepare students for graduate or advanced education
UGGOAL04	UG Goal: Develop moral character
UGGOAL05	UG Goal: Provide for students' emotional development
UGGOAL06	UG Goal: Teach students the classic works of Western civilization
UGGOAL07	UG Goal: Help students develop personal values
UGGOAL08	UG Goal: Enhance students' self-understanding
UGGOAL09	UG Goal: Instill in students a commitment to community service
UGGOAL10	UG Goal: Enhance students' knowledge of and appreciation for other racial/ethnic groups
UGGOAL11	UG Goal: Help master knowledge in a discipline
UGGOAL12	UG Goal: Develop creative capacities
UGGOAL13	UG Goal: Instill a basic appreciation of the liberal arts
UGGOAL14	UG Goal: Promote ability to write effectively
UGGOAL15	UG Goal: Help students evaluate the quality and reliability of information
UGGOAL16	UG Goal: Engage students in civil discourse around controversial issues
UGGOAL17	UG Goal: Teach students tolerance and respect for different beliefs
UGGOAL18	UG Goal: Encourage students to become agents of social change
	During the present term, how many hours per week on the average do you actually spend on each of the following activities? 　1=None 　2=1-4 　3=5-8 　4=9-12 　5=13-16 　6=17-20 　7=21-34 　8=35-44 　9=45+
HPW01	Hours per Week: Scheduled teaching (give actual, not credit hours)
HPW02	Hours per Week: Preparing for teaching (including reading student papers and grading)
HPW03	Hours per Week: Advising and counseling of students
HPW04	Hours per Week: Committee work and meetings
HPW05	Hours per Week: Other administration
HPW06	Hours per Week: Research and scholarly writing
HPW07	Hours per Week: Other creative products/performances
HPW08	Hours per Week: Consultation with clients/patients
HPW09	Hours per Week: Community or public service
HPW10	Hours per Week: Outside consulting/freelance work
HPW11	Hours per Week: Household/childcare duties
HPW12	Hours per Week: Commuting to campus
HPW13	Hours per Week: Other employment, outside of academia
	For each of the following items, please mark either Yes or No 　1=No 　2=Yes
GENACT01	Act: Are you a member of a faculty union?
GENACT02	Act: Are you a U.S. citizen?
GENACT03	Act: Do you plan to retire within the next three years?
GENACT04	Act: Do you use your scholarship to address local community needs?
GENACT05	Act: Have you been sexually harassed at this institution?
GENACT06	Act: Have you ever interrupted your professional career for more than one year for family reasons?
GENACT07	Act: Have you ever received an award for outstanding teaching?
GENACT08	Act: Is (or was) your spouse/partner an academic?

Variable Name	Variable Description
	During the past two years, have you?
	1=No
	2=Yes
PASTACT01	Past Act: Considered early retirement?
PASTACT02	Past Act: Considered leaving academe for another job?
PASTACT03	Past Act: Considered leaving this institution for another?
PASTACT04	Past Act: Changed academic institutions?
PASTACT05	Past Act: Engaged in paid consulting outside of your institution?
PASTACT06	Past Act: Engaged in public service/professional consulting without pay?
PASTACT07	Past Act: Received at least one firm job offer?
PASTACT08	Past Act: Requested/sought an early promotion?
COMEBACK	If you were to begin your career again, would you: still want to come to this institution?
DO_OVER	If you were to begin your career again, would you still want to be a college professor?
	1=Definitely no
	2=Probably no
	3=Not sure
	4=Probably yes
	5=Definitely yes
	Indicate how well each of the following describes your college or university:
	1=Not descriptive
	2=Somewhat descriptive
	3=Very descriptive
INSTDESCR01	Inst Description: It is easy for students to see faculty outside of regular office hours
INSTDESCR02	Inst Description: The faculty are typically at odds with campus administration
INSTDESCR03	Inst Description: Faculty here respect each other
INSTDESCR04	Inst Description: Most students are treated like 'numbers in a book'
INSTDESCR05	Inst Description: Faculty are rewarded for being good teachers
INSTDESCR06	Inst Description: There is respect for the expression of diverse values and beliefs
INSTDESCR07	Inst Description: Faculty are rewarded for their efforts to use instructional technology
INSTDESCR08	Inst Description: Administrators consider faculty concerns when making policy
INSTDESCR09	Inst Description: The administration is open about its policies
	Please indicate the extent to which each of the following has been a source of stress for you during the last two years
	1=Not applicable
	2=Not at all
	3=Somewhat
	4=Extensive
STRESS01	Stress: Managing household responsibilities
STRESS02	Stress: Child care
STRESS03	Stress: Care of elderly parent
STRESS04	Stress: My physical health
STRESS05	Stress: Health of spouse/partner
STRESS06	Stress: Review/promotion process
STRESS07	Stress: Subtle discrimination (e.g., prejudice, racism, sexism)
STRESS08	Stress: Personal finances
STRESS09	Stress: Committee work
STRESS10	Stress: Faculty meetings
STRESS11	Stress: Colleagues
STRESS12	Stress: Students
STRESS13	Stress: Research or publishing demands
STRESS14	Stress: Institutional procedures and 'red tape'
STRESS15	Stress: Teaching load
STRESS16	Stress: Children's problems
STRESS17	Stress: Friction with spouse/partner
STRESS18	Stress: Lack of personal time
STRESS19	Stress: Keeping up with information technology
STRESS20	Stress: Job security
STRESS21	Stress: Being part of a dual career couple
STRESS22	Stress: Working with underprepared students
STRESS23	Stress: Self-imposed high expectations
STRESS24	Stress: Change in work responsibilities
STRESS25	Stress: Institutional budget cuts

Variable Name	Variable Description
	How satisfied are you with the following aspects of your job?
	1=Not applicable
	2=Not satisfied
	3=Marginally satisfied
	4=Satisfied
	5=Very satisfied
SATIS01	Satisfaction: Salary
SATIS02	Satisfaction: Health benefits
SATIS03	Satisfaction: Retirement benefits
SATIS04	Satisfaction: Opportunity for scholarly pursuits
SATIS05	Satisfaction: Teaching load
SATIS06	Satisfaction: Quality of students
SATIS07	Satisfaction: Office/lab space
SATIS08	Satisfaction: Autonomy and independence
SATIS09	Satisfaction: Professional relationships with other faculty
SATIS10	Satisfaction: Social relationships with other faculty
SATIS11	Satisfaction: Competency of colleagues
SATIS12	Satisfaction: Job security
SATIS13	Satisfaction: Departmental leadership
SATIS14	Satisfaction: Course assignments
SATIS15	Satisfaction: Freedom to determine course content
SATIS16	Satisfaction: Availability of child care at this institution
SATIS17	Satisfaction: Prospects for career advancement
SATIS18	Satisfaction: Clerical/administrative support
SATIS19	Satisfaction: Overall job satisfaction
SATIS20	Satisfaction: Tuition remission for your children/dependents
	Indicate the extent to which you agree or disagree with each of the following:
	1=Disagree strongly
	2=Disagree somewhat
	3=Agree somewhat
	4=Agree strongly
INSOPN01	Inst Opinion: Faculty are interested in students' personal problems
INSOPN02	Inst Opinion: Racial and ethnic diversity should be more strongly reflected in the curriculum
INSOPN03	Inst Opinion: Faculty feel that most students are well-prepared academically
INSOPN04	Inst Opinion: This institution should hire more faculty of color
INSOPN05	Inst Opinion: This institution should hire more women faculty
INSOPN06	Inst Opinion: Student Affairs staff have the support and respect of faculty
INSOPN07	Inst Opinion: Faculty are committed to the welfare of this institution
INSOPN08	Inst Opinion: Faculty here are strongly interested in the academic problems of undergraduates
INSOPN09	Inst Opinion: There is a lot of campus racial conflict here
INSOPN10	Inst Opinion: My research is valued by faculty in my department
INSOPN11	Inst Opinion: My teaching is valued by faculty in my department
INSOPN12	Inst Opinion: Faculty of color are treated fairly here
INSOPN13	Inst Opinion: Women faculty are treated fairly here
INSOPN14	Inst Opinion: Gay and lesbian faculty are treated fairly here
INSOPN15	Inst Opinion: Faculty are sufficiently involved in campus decision making
INSOPN16	Inst Opinion: My values are congruent with the dominant institutional values
INSOPN17	Inst Opinion: This institution takes responsibility for educating underprepared students
INSOPN18	Inst Opinion: The criteria for advancement and promotion decisions are clear
INSOPN19	Inst Opinion: Most of the students I teach lack the basic skills for college level work
INSOPN20	Inst Opinion: There is adequate support for faculty development

Variable Name	Variable Description
	Indicate how important you believe each priority listed below is at your college or university
	1=Low priority
	2=Medium priority
	3=High priority
	4=Highest priority
INSTPRIORITY01	Inst Priority: To promote the intellectual development of students
INSTPRIORITY02	Inst Priority: To develop a sense of community among students and faculty
INSTPRIORITY03	Inst Priority: To facilitate student involvement in community service
INSTPRIORITY04	Inst Priority: To help students learn how to bring about change in society
INSTPRIORITY05	Inst Priority: To increase or maintain institutional prestige
INSTPRIORITY06	Inst Priority: To hire faculty 'stars'
INSTPRIORITY07	Inst Priority: To recruit more minority students
INSTPRIORITY08	Inst Priority: To enhance the institution's national image
INSTPRIORITY09	Inst Priority: To create a diverse multi-cultural campus environment
INSTPRIORITY10	Inst Priority: To promote gender equity among faculty
INSTPRIORITY11	Inst Priority: To provide resources for faculty to engage in community-based teaching or research
INSTPRIORITY12	Inst Priority: To create and sustain partnerships with surrounding communities
INSTPRIORITY13	Inst Priority: To pursue extramural funding
INSTPRIORITY14	Inst Priority: To increase the representation of minorities in the faculty and administration
INSTPRIORITY15	Inst Priority: To strengthen links with the for-profit, corporate sector
INSTPRIORITY16	Inst Priority: To develop leadership ability among students
INSTPRIORITY17	Inst Priority: To increase the representation of women in the faculty and administration
INSTPRIORITY18	Inst Priority: To develop an appreciation for multiculturalism
	Please indicate your agreement with each of the following statements
	1=Disagree strongly
	2=Disagree somewhat
	3=Agree somewhat
	4=Agree strongly
VIEW01	View: The chief benefit of a college education is that it increases one's earning power
VIEW02	View: Promoting diversity leads to the admission of too many underprepared students
VIEW03	View: Colleges should be actively involved in solving social problems
VIEW04	View: Colleges should encourage students to be involved in community service activities
VIEW05	View: A racially/ethnically diverse student body enhances the educational experience of all students
VIEW06	View: Realistically, an individual can do little to bring about changes in society
VIEW07	View: Colleges should be concerned with facilitating undergraduate students' spiritual development
VIEW08	View: Colleges have a responsibility to work with their surrounding communities to address local issues
VIEW09	View: Private funding sources often prevent researchers from being completely objective in the conduct of their work
VIEW10	View: Colleges should prohibit racist/sexist speech on campus
VIEW11	View: This institution should not offer remedial/developmental education
SALARY	Please enter your base institutional salary. ($1,000,000 maximum)
SALARYBASE	Your base institutional salary reported above is based on:
	1=Less than 9 months
	2=9/10 months
	3=11/12 months
Part-time Employee	
PTSALARY	Please enter your total salary from teaching at this institution for this academic year. ($100,000 maximum)
PTPAY	How much are you paid per course at this institution? ($50,000 maximum)
End	
	What percentage of your current year's income comes from:
	(e.g., for 45%, please enter 45 - total for all response must equal 100%)
SALARYSOURCE01	Salary: Base salary from this institution
SALARYSOURCE02	Salary: Other income from this institution
SALARYSOURCE03	Salary: Income from another academic institution
SALARYSOURCE04	Salary: Non-academic income
BIRTHYR	Year of birth:
DEGYR	Year of highest degree now held:
APPTYR	Year of appointment at present institution:
TENUREYR	If tenured, year tenure was awarded:

Variable Name	Variable Description
MAJOR	Major of highest degree held - General Area
DEPT	Department of current faculty appointment - General Area
	1=Agriculture/natural resources/related
	2=Architecture and related services
	3=Area/ethnic/cultural/gender studies
	4=Arts (visual and performing)
	5=Biological and biomedical sciences
	6=Business/management/marketing/related
	7=Communication/journalism/ comm. tech
	8=Computer/info sciences/support tech
	9=Construction trades
	10=Education
	11=Engineering technologies/technicians
	12=English language and literature/letters
	13=Family/consumer sciences, human sciences
	14=Foreign languages/literature/linguistics
	15=Health professions/clinical sciences
	16=Legal professions and studies
	17=Library science
	18=Mathematics and statistics
	19=Mechanical/repair technologies/techs
	20=Multi/interdisciplinary studies
	21=Parks/recreation/leisure/fitness studies
	22=Precision production
	23=Personal and culinary services
	24=Philosophy, religion & theology
	25=Physical sciences
	26=Psychology
	27=Public administration/social services
	28=Science technologies/technicians
	29=Security & protective services
	30=Social sciences (except psych) and history
	31=Transportation & materials moving
	32=Other

Variable Name	Variable Description
MAJORDISC	Major of highest degree held - Specific Discipline
DEPTDISC	Department of current faculty appointment - Specific Discipline
	0101=Agriculture and related sciences
	0102=Natural resources and conservation
	0103=Agriculture/natural resources/related, other
	0201=Architecture and related services
	0301=Area/ethnic/cultural/gender studies
	0401=Art history, criticism, and conservation
	0402=Design & applied arts
	0403=Drama/theatre arts and stagecraft
	0404=Fine and studio art
	0405=Music, general
	0406=Music history, literature, and theory
	0407=Commercial and advertising art
	0408=Dance
	0409=Film, video and photographic arts
	0410=Visual and performing arts, other
	0501=Biochem/biophysics/molecular biology
	0502=Botany/plant biology
	0503=Genetics
	0504=Microbiological sciences & immunology
	0505=Physiology, pathology & related sciences
	0506=Zoology/animal biology
	0507=Biological & biomedical sciences, other
	0601=Accounting and related services
	0602=Business admin/management/operations
	0603=Business operations support/assistance
	0604=Finance/financial management services
	0605=Human resources management and svcs
	0606=Marketing
	0607=Management information systems/services
	0608=Business/mgt/marketing/related, other
	0701=Communication/journalism/related prgms
	0702=Communication technologies/technicians and support services
	0703=Communication/journalism/ comm. tech, other
	0801=Computer/info tech administration/mgmt
	0802=Computer programming
	0803=Computer science
	0804=Computer software and media applications
	0805=Computer systems analysis
	0806=Computer systems networking/telecom
	0807=Data entry/microcomputer applications
	0808=Data processing
	0809=Information science/studies
	0810=Computer/info sci/support svcs, other
	0901=Construction trades
	1001=Curriculum and instruction
	1002=Educational administration/supervision
	1003=Educational/instructional media design
	1004=Special education and teaching
	1005=Student counseling/personnel services
	1006=Early childhood education and teaching
	1007=Elementary education and teaching
	1008=Secondary education and teaching
	1009=Adult and continuing education/teaching
	1010=Teacher ed: specific levels, other
	1011=Teacher ed: specific subject areas
	1012=Bilingual & multicultural education
	1013=Ed assessment
	1014=Higher education
	1015=Education, other
	1101=Biomedical/medical engineering
	1102=Chemical engineering
	1103=Civil engineering
	1104=Computer engineering

Variable Name	Variable Description
MAJORDISC	Major of highest degree held - Specific Discipline
DEPTDISC	Department of current faculty appointment - Specific Discipline
	1105=Electrical/electronics/comms engineering
	1106=Engineering technologies/technicians
	1107=Environmental/environmental health eng
	1108=Mechanical engineering
	1109=Engineering, other
	1201=English language and literature/letters
	1301=Family/consumer sciences, human sciences
	1401=Foreign languages/literature/linguistics
	1501=Alternative/complementary medicine/sys
	1502=Chiropractic
	1503=Clinical/medical lab science/allied
	1504=Dental support services/allied
	1505=Dentistry
	1506=Health & medical administrative services
	1507=Allied health and medical assisting services
	1508=Allied health diagnostic, intervention, treatment professions
	1509=Medicine, including psychiatry
	1510=Mental/social health services and allied
	1511=Nursing
	1512=Optometry
	1513=Osteopathic medicine/osteopathy
	1514=Pharmacy/pharmaceutical sciences/admin
	1515=Podiatric medicine/podiatry
	1516=Public health
	1517=Rehabilitation & therapeutic professions
	1518=Veterinary medicine
	1519=Health/related clinical services, other
	1601=Law
	1602=Legal support services
	1603=Legal professions and studies, other
	1701=Library science
	1801=Mathematics
	1802=Statistics
	1803=Mathematics and statistics, other
	1901=Mechanical/repair technologies/techs
	2001=Multi/interdisciplinary studies
	2101=Parks, recreation and leisure studies
	2102=Health and physical education/fitness
	2103=Parks/recreation/leisure/fitness studies, other
	2201=Precision production
	2301=Culinary arts and related services
	2302=Personal and culinary services
	2303=Personal and culinary services, other
	2401=Philosophy
	2402=Religion/religious studies
	2403=Theology and religious vocations
	2404=Philosophy, religion & theology, other
	2501=Astronomy & astrophysics
	2502=Atmospheric sciences and meteorology
	2503=Chemistry
	2504=Geological & earth sciences/geosciences
	2505=Physics
	2506=Physical sciences, other
	2601=Behavioral psychology
	2602=Clinical psychology
	2603=Education/school psychology
	2604=Psychology, other
	2701=Public administration
	2702=Social work
	2703=Public administration & social svcs other
	2801=Science technologies/technicians
	2901=Corrections
	2902=Criminal justice

Variable Name	Variable Description
MAJORDISC DEPTDISC	Major of highest degree held - Specific Discipline Department of current faculty appointment - Specific Discipline 2903=Fire protection 2904=Police science 2905=Security and protective services, other 3001=Anthropology (except psychology) 3002=Archaeology 3003=Criminology 3004=Demography & population studies 3005=Economics 3006=Geography & cartography 3007=History 3008=International relations & affairs 3009=Political science and government 3010=Sociology 3011=Urban studies/affairs 3012=Social sciences, other 3101=Transportation and materials moving 3201=Other
NCHILD1 NCHILD2	How many children do you have in the following age ranges: 1=0 2=1 3=2 4=3 5=4+ Child: Under 18 years old Child: 18 years or older
POLIVIEW	How would you characterize your political views? 1=Far right 2=Conservative 3=Middle-of-the-road 4=Liberal 5=Far left
MARITAL	Are you currently: 1=Single 2=Married 3=Unmarried, living with partner 4=Divorced 5=Widowed 6=Separated
SEX	Your sex: 1=Male 2=Female
NATENGSP	Is English your native language? 1=No 2=Yes
RACE1 RACE2 RACE3 RACE4 RACE5 RACE6 RACE7 RACE8 RACE9	Racial/Ethnic group: 1=Not marked 2=Marked White/Caucasian African American/Black American Indian/Alaska Native Asian American/Asian Native Hawaiian/Pacific Islander Mexican American/Chicano Puerto Rican Other Latino Other
PERMIT	Do you give the Higher Education Research Institute (HERI) permission to retain your contact information (i.e., your email address and name) for possible follow-up research? 1=No 2=Yes

Variable Name	Variable Description

	Optional Questions
	  1=A
	  2=B
	  3=C
	  4=D
	  5=E

OPT01	Optional Question 1
OPT02	Optional Question 2
OPT03	Optional Question 3
OPT04	Optional Question 4
OPT05	Optional Question 5
OPT06	Optional Question 6
OPT07	Optional Question 7
OPT08	Optional Question 8
OPT09	Optional Question 9
OPT10	Optional Question 10
OPT11	Optional Question 11
OPT12	Optional Question 12
OPT13	Optional Question 13
OPT14	Optional Question 14
OPT15	Optional Question 15
OPT16	Optional Question 16
OPT17	Optional Question 17
OPT18	Optional Question 18
OPT19	Optional Question 19
OPT20	Optional Question 20
Faculty Survey - Derived Variables	

RRACE	Responded to race
	  1=No
	  2=Yes

RACEGROUP	Race/Ethnicity Group
	  1=American Indian
	  2=Asian
	  3=Black
	  4=Hispanic
	  5=White
	  6=Other
	  7=Two or more race/ethnicity

SALARY09
SALARY12
	Base salary (9-10 month)
	Base salary (11-12 month)
	  1=Less than $20,000
	  2=$20,000 to $29,999
	  3=$30,000 to $39,999
	  4=$40,000 to $49,999
	  5=$50,000 to $59,999
	  6=$60,000 to $69,999
	  7=$70,000 to $79,999
	  8=$80,000 to $89,999
	  9=$90,000 to $99,999
	  10=$100,000 to $124,999
	  11=$125,000 to $149,999
	  12=$150,000 or more

AGE	Age as of 12/31/10
	  1=Under 30
	  2=30 to 34
	  3=35 to 39
	  4=40 to 44
	  5=45 to 49
	  6=50 to 54
	  7=55 to 59
	  8=60 to 64
	  9=65 to 69
	  10=70+

Variable Name	Variable Description

DEGYRA
APPTYRA
TENYRA
	Year highest degree earned
	Year of appointment at current institution aggregated
	Year received tenure
	  1=1973 or less
	  2=1974 - 1978
	  3=1979 - 1983
	  4=1984 - 1988
	  5=1989 - 1993
	  6=1994 - 1998
	  7=1999 - 2003
	  8=2004 - 2008
	  9=2009 - 2011

MAJORA
DEPTA
	Major of highest degree held aggregated
	Department of current faculty appointment aggregated
	  1=Agriculture or Forestry (General Area=1)
	  2=Biological Sciences (General Area=5)
	  3=Business (General Area=6)
	  4=Education (General Area=10 and Specific Discipline=2102)
	  5=Engineering (General Area=11)
	  6=English (General Area=12)
	  7=Health-related (General Area=15)
	  8=History or Political Science (Specific Discipline=3007,3009)
	  9=Humanities (General Area=14,24)
	  10=Fine Arts (General Area=2,4,22)
	  11=Mathematics or Statistics (General Area=18)
	  12=Physical Sciences (General Area=25)
	  13=Social Sciences (General Area=3,26,27 and
	     Specific Discipline=3001,3002,3003,3004,3005,3006,3008,3010,3011,3012)
	  14=Other Technical (General Area=8,19,28)
	  15=Other Non-technical (General Area=7,9,13,16,17,20,23,29,31,32 and Specific Discipline=2101,2103)

SALARYSOURCE01A
SALARYSOURCE02A
SALARYSOURCE03A
SALARYSOURCE04A
	Aggregated - Base salary from this institution
	Aggregated - Other income from this institution
	Aggregated - Income from another academic institution
	Aggregated - Non-academic income
	  1=0%
	  2=GT 0% and LT 25%
	  3=GE 25% and LT 50%
	  4=GE 50% and LT 75%
	  5=GE 75% and LT 100%
	  6=100%

RESTYPE1
RESTYPE2
RESTYPE3
RESTYPE4
RESTYPE5
	Full-time undergraduate faculty
	Part-time undergraduate faculty
	Full-time academic administrator
	Graduate-only faculty
	Other staff
	  1=No
	  2=Yes

SUBMITDATE	Date survey submitted

SUPPFLAG	Supplemental flag
	  1=No
	  2=Yes

POP	Sample type
	  1=HERI supplemental 2004 4yr institutions
	  2=HERI supplemental 2004 2yr institutions
	  3=HERI supplemental 2007 4yr institutions
	  4=HERI supplemental 2007 2yr institutions
	  5=Random email supplemental
	  6=Not random email supplemental
	  7=Participating institution

NORMSTAT	Norms status
	  1=In norms
	  2=Not in norms

FACWGT	Faculty weight

Variable Name	Variable Description
Faculty Survey - Institutional Characteristics	
STRAT	CIRP Stratification Cell
	1=Public Universities - low
	2=Public Universities - medium
	3=Public Universities - high
	4=Private Universities - medium
	5=Private Universities - high
	6=Private Universities - very high
	7=Public 4yr Colleges - low
	8=Public 4yr Colleges - medium
	9=Public 4yr Colleges - high
	10=Public 4yr Colleges - unknown
	11=Private/Nonsectarian 4yr Colleges - low
	12=Private/Nonsectarian 4yr Colleges - medium
	13=Private/Nonsectarian 4yr Colleges - high
	14=Private/Nonsectarian 4yr Colleges - very high
	15=Private/Nonsectarian 4yr Colleges - unknown
	16=Catholic 4yr Colleges - low
	17=Catholic 4yr Colleges - medium
	18=Catholic 4yr Colleges - high
	19=Catholic 4yr Colleges - unknown
	20=Other Religious 4yr Colleges - very low
	21=Other Religious 4yr Colleges - low
	22=Other Religious 4yr Colleges - medium
	23=Other Religious 4yr Colleges - high
	24=Other Religious 4yr Colleges - unknown
	25=Public 2yr Colleges - very low
	26=Public 2yr Colleges - low
	27=Public 2yr Colleges - medium
	28=Public 2yr Colleges - high
	29=Public 2yr Colleges - very high
	30=Private 2yr Colleges - very low
	31=Private 2yr Colleges - low
	32=Private 2yr Colleges - medium
	33=Private 2yr Colleges - high
	34=HBCU Public 4yr Colleges
	35=HBCU Private 4yr Colleges
	36=HBCU Public 2yr Colleges
	37=HBCU Private 2yr Colleges
	38=HBCU Other Religious 4yr Colleges
	39=HBCU Catholic 4yr Colleges
	40=HBCU Public Universities
	41=HBCU Private Universities
	99=Other
STATE	Institution's state
HERIREG	HERI Region
	1=East
	2=Midwest
	3=South
	4=West
OBEREG	OBE Region
	1=New England - CT ME MA NH RI VT
	2=Mid East - DE DC MD NJ NY PA
	3=Great Lakes - IL IN MI OH WI
	4=Plains - IA KS MN MO NE ND SD
	5=Southeast - AL AR FL GA KY LA MS NC SC TN VA WV
	6=Southwest - AZ NM OK TX
	7=Rocky Mountains - CO ID MT UT WY
	8=Far West - AK CA HI NV OR WA
	9=Other
HBCU	HBCU Flag
	1=Not HBCU
	2=Public HBCU
	3=Private HBCU
SELECTIVITY	Institutional Selectivity

Variable Name	Variable Description
INSTTYPE	Institution Type 1=University 2=4-year 3=2-year
INSTCONT	Institution Control 1=Public 2=Private
COMPGROUP1	Comparison Group 1 1=Public Universities 2=Private Universities 3=Public 4yr Colleges 4=Nonsectarian 4yr Colleges 5=Catholic 4yr Colleges 6=Other Religious 4yr Colleges 7=Public 2yr Colleges 8=Private 2yr Colleges
COMPGROUP2	Comparison Group 2 1=Public Universities, Private Universities, Public 4yr Colleges 2=Nonsectarian, Catholic, Other Religious 4yr Colleges 3=Public 2yr Colleges 4=Private 2yr Colleges
COMPGROUP3	Comparison Group 3 1=All Baccalaureate Institutions 2=All Two-Year Colleges
FAC Constructs - Scores	
PEDAGOGY UG_DEVELOPMENT PRODUCTIVITY CM_PRACTICE CM_VALUES SATIS_WORKPLACE SATIS_COMPENSATION STRESS IP_DIVERSITY IP_ENGAGEMENT IP_PRESTIGE SOCIAL_AGENCY	Student-Centered Pedagogy Undergraduate Education Goal: Personal Development Scholarly Productivity Civic Minded Practice Civic Minded Values Workplace Satisfaction Satisfaction with Compensation Career Related Stress Inst Priority: Commitment to Diversity Inst Priority: Civic Engagement Inst Priority: Civic Prestige Social Agency
FAC Constructs - Groups	
PEDAGOGY_GRP UG_DEVELOPMENT_GRP PRODUCTIVITY_GRP CM_PRACTICE_GRP CM_VALUES_GRP SATIS_WORKPLACE_GRP SATIS_COMPENSATION_GRP STRESS_GRP IP_DIVERSITY_GRP IP_ENGAGEMENT_GRP IP_PRESTIGE_GRP SOCIAL_AGENCY_GRP	Student-Centered Pedagogy Group Undergraduate Education Goal: Personal Development Scholarly Productivity Group Civic Minded Practice Group Civic Minded Values Group Workplace Satisfaction Group Satisfaction with Compensation Group Career Related Stress Group Inst Priority: Commitment to Diversity Group Inst Priority: Civic Engagement Group Inst Priority: Civic Prestige Group Social Agency Group 1=Low score 2=Average Score 3=High score

UCLA OHRPP
Office of the Human Research Protection Program

11000 Kinross Avenue, Suite 102
Los Angeles, CA 90095-1694

http://www.ohrpp.research.edu
GC-IRB: (310) 825-7122
M-IRB: (310) 825-5344

APPROVAL NOTICE
Continuing review

DATE:	7/21/2010
TO:	JOHN PRYOR EDUCATION
FROM:	NANCY LEVINE Chair, NGIRB
RE:	IRB#10-000213 Higher Education Research Institute (HERI) Faculty Survey version 1.0 6/4/2010

The UCLA Institutional Review Board (UCLA IRB) has approved the above-referenced study. The UCLA IRB's Federalwide Assurance (FWA) with Department of Health and Human Services is FWA00004642 (IRB00000174).

Submission and Review Information

Type of Review	Full Board Review
Approval Date	7/19/2010
Expiration Date of the Study	6/16/2011
Funding Source(s)	

General Conditions of Approval

Please click here for a description of the general conditions of approval

Documents Reviewed included, but were not limited to:

Document Name	Document Version #
Administration Checklist.pdf	0.01
Purchase Order Instruction Sheet.pdf	0.01
Administration Guidelines.pdf	0.01
Welcome Screen.pdf	0.01
Invitation and Reminders.pdf	0.01
AntiSpam Guidelines.pdf	0.01
Survey Information Sheet (Clean).pdf	0.01
Thank you Screen Text.pdf	0.01

Important Note: Approval by the UCLA Institutional Review Board does not, in and of itself, constitute approval for this study at all sites. Other institutional clearances and approvals may be required before study activities are initiated. These include, but are not limited to departmental approvals, UCLA internal committees, and other IRBs as noted in the specific conditions of approval.

From:	O'Connor, Dawn
Sent:	Wednesday, July 30, 2014 1:31 PM
To:	Miller, Deb
Subject:	RE: Question about IRB

Good afternoon Deb,

Thank you for the email. Based on the information you submitted, the IRB understands you will not intervene or interact with human subjects and all data to which you will have access are de-identified. As outlined, this project is not human subject research as defined in federal regulations 45 CFR 46. As such, IRB review and approval is not necessary. Thank you for your consideration of human subject protection in research and contacting our office about your project. We wish you much luck on your dissertation. Please let us know if you have further questions or if we can assist in some way. Thank you.

Best Regards,

Dawn P. O'Connor
Research Integrity Assistant Director
Office of Research and Sponsored Programs
University of North Florida
1 UNF Drive
Building 3, Suite 2501
Jacksonville, FL 32224

Fax: 904.620.2457
Web: http://www.unf.edu/research/Research_Integrity.aspx

Thank you in advance for including your designated research integrity number (i.e., IACUC, IBC, IRB #) in the subject line of each email.

🌲 Save a tree, file electronically.
The Earth thanks you!

From: Miller, Deb
Sent: Thursday, July 24, 2014 4:34 PM
To: O'Connor, Dawn
Subject: Question about IRB

Hi Dawn,
Hope this finds you well. For my dissertation research, I will be using an extant data set from HERI at UCLA. These data do not contain individual or institutional identifiers. (http://www.heri.ucla.edu/gainaccess.php).

I have successfully submitted a proposal to HERI and been approved for data access. I will be using data from the 2010 faculty survey; the 2010-2011 sample included 37,933 responses from faculty at 498 institutions. My understanding of the IRB process at UNF, after consultation with my faculty advisor, is that use of this type of extant data set, without any individual or institutional identifiers, does not require approval from the IRB review board.

Just wanted to touch base with you to confirm.

Best,

Deb

Deb Miller
Doctoral Candidate, Educational Leadership, University of North Florida

Director, Center for Instruction & Research Technology
University of North Florida

http://www.unf.edu/cirt/

"*We are tied together in the single garment of destiny, caught in an inescapable network of mutuality.*" – Dr. Martin Luther King, Jr

HERI Research Request Cover Page

Title of Study: Analyzing the Effect of Organizational Context on Faculty Participation in Online Teach

PRINCIPAL INVESTIGATOR: Deborah Miller

Institutional Affiliation: University of North Florida

Address: 1 UNF Drive Jacksonville, FL 32224

Phone:

Email:

CO-INVESTIGATOR:

Institutional Affiliation:

Address:

Phone:

Email:

✓ NEW PROJECT ☐ REVISION OF PREVIOUS SUBMISSION* ☐ EXTENSION OF APPROVED PROJECT

*If revisions have been requested, please clearly identify and explain them

Signature Deleted

SIGNATURES: DATE: 7/2/14
_____
Principal Investigator

Signature Deleted

For student projects ⟨

DATE: 7/2/2014
_____
Faculty Sponsor/Department Chairperson (print name)

_____
Faculty Sponsor/Department Chairperson (signature)

** Faculty Sponsor or Department Chairperson signature indicates:
   a)   the scientific questions addressed in this study have adequate merit to justify studies involving human subjects,
   b)   the potential risks of this study have been accurately and fully described, and
   c)   the study design is adequate to answer the questions being asked.

Submit form to:
Kevin Eagan, Ph.D. CIRP Assistant Director for Research
Higher Education Research Institute
3005 Moore Hall, Box 951521
Los Angeles, CA 90095-1521

For OFFICE USE ONLY
[ ] Approved   [ ] Conditionally Approved   [ ] Not Approved

COMMENTS:

REVIEWER'S SIGNATURE: _____

Data Access Approval Form

Rev'd 07/02/12

UNF

June 27, 2014

Higher Education Research Institute
3005 Moore Hall, Box 951521
Los Angeles, CA 90095-1521

I am writing this letter in strong support of the doctoral dissertation research project of Deborah Miller at the University of North Florida and the appropriateness of using the HERI data for this purpose. I am serving as one of the faculty members on Ms. Miller's dissertation committee.

Ms. Miller has developed a conceptually sophisticated and empirically rigorous research proposal designed to study the individual and contextual factors contributing to faculty participation in online teaching. The variables she has selected from the HERI data set are ideally suited for this empirical investigation. I believe this research can make a distinctive contribution to the literature due to the range of theoretical perspectives incorporated into the causal model as well as the discriminant analysis statistical technique she intends to employ. The results of the research should also have applied practical significance and implications for academic policies and procedures associated with advancing the use of instructional technologies.

If there is anything else I can provide in the way of support and a recommendation for Ms. Miller's research project, and use of these data, it would be my pleasure to do so.

Sincerely,

Signature Deleted

Professor of Sociology
University of North Florida
1 UNF Drive
Jacksonville, FL 32224

Proposal Narrative

Title
Analyzing the Effect of Organizational Context on Faculty Participation in Online Teaching

Purpose
The purpose of this quantitative study is to analyze the influence of institutional context on the participation of faculty in online teaching at public higher education institutions in the United States. A clear understanding of the extent to which intrinsic motivation interacts with institutional factors to predict participation in distance learning can inform campus leaders and policy makers in the continued development of distance learning education models.

Faculty issues have not been given sufficient attention in research on distance learning, particularly research related to faculty motivation and the impact of institutional policies (Wolcott, 2003). While several studies (Beggs, 2000; Betts, 1998; Gannon-Cook, Ley, Crawford & Warner, 2009; Lee, 2001; Maguire, 2005; Schifter, 2000) have focused on factors that motivate faculty to participate in online teaching, results have been conflicting as to whether that motivation is primarily intrinsic or extrinsic. Additionally, the majority of the studies reported on research conducted at a single institution, rather than across institutions (Labach, 2011). Existing research largely focuses on the application of distance learning while ignoring context (Maguire, 2005; Mitchell & Geva-May, 2009; Perraton, 2000), and motivation cannot be adequately understood without an examination of the environment in which it occurs. While there has been significant work done on organizational culture and change in institutions of higher education, few studies have connected change as a result of the increase in distance learning to institutional context as a way of understanding faculty perception and participation. Little research has been done on the interaction between individual and institutional factors, and how institutional factors influence individual factors related to faculty participation in online teaching.

Six bodies of literature were examined to develop a theoretical framework for the study. A review of the growth of online learning and its impact on higher education provides an historical context in which to understand the significance of the research questions. The review of literature related to organizational theory in higher education provides the conceptual framework for understanding the influence of organizational context in this study. Organizational context includes the structural characteristics, organizational culture, support mechanisms, reward systems, and climate factors present in institutions of higher education that may affect individual faculty behaviors. A review of change/innovation theory establishes a foundation for understanding how change processes, such as the adoption of new instructional modalities, are enacted by individuals and by organizations. Innovation theory provides background for understanding how new ideas and technologies spread through a social system. Literature related to faculty development and its role in change processes is reviewed to provide a lens through which to view personal and organizational development, particularly as related to online teaching. Motivation theories provide a conceptual basis for understanding faculty impetus toward, and participation in, online teaching. Human motivation is a strong force in change processes, and so consideration of the impact that individual perceptions of autonomy and control in a particular organizational context have on task meaning and the personal investment of time and effort can enhance understanding of faculty adoption of new instructional methods. Lastly, an examination of the current state of knowledge related to faculty participation in

distance learning establishes current understanding, identifies gaps, and situates this study's research questions within the current state of knowledge.

This study fills a gap in the literature by connecting bodies of research that have not been thoroughly linked in the past. Additionally, this research will analyze a large data set to determine how well intrinsic factors reported in the literature as driving faculty motivation toward participation in online teaching actually predict faculty participation, and further, to determine what effect institutional factors have on that predicted participation.

Research Questions and Hypotheses

This study's research questions examine both individual and contextual variables in order to increase understanding of the effects of institutional context on the participation of full-time faculty in online teaching. Specifically, the five questions under investigation in the present study are: (a) To what extent does faculty interest in teaching predict participation in online teaching? (b) To what extent does faculty orientation toward student-centered instructional methods predict participation in online teaching? (c) To what extent does perceived autonomy and control predict faculty participation in online teaching? (d) To what extent does institutional climate predict faculty participation in online teaching? (e) To what extent does institutional support predict faculty participation in online teaching?

Based on the review of literature in this study, two major subsets of hypotheses will guide the analysis of data. First, it is hypothesized that faculty interest in teaching and orientation toward student-centered pedagogy will be related to participation in online teaching. Faculty who report a high degree of interest in teaching will tend to have greater participation in online teaching. Faculty who report a high degree of involvement in student-centered pedagogy will tend to have greater participation in online teaching. Next, it is hypothesized that factors related to institutional context will interact with interest in teaching and student-centered pedagogy, resulting in variance across groups. Faculty interested in teaching and oriented toward student-centered pedagogy who experience high levels of autonomy and control, institutional support, and a positive institutional climate will be more likely to participate in online teaching.

Dataset

HERI Faculty Survey, 2010. Data Access Variable List is attached.

Variables in the HERI data set directly related to the areas of interest in this study include individual and institutional factors identified in the literature as related to participation in online teaching. These independent variables include interest in teaching, student-centered pedagogy, autonomy and control, instructional support, and institutional climate. The dependent variable in the study is online teaching.

Method of Analysis

Data analysis will include examining demographic data, excluding responses from institutions at which no faculty member reported teaching exclusively online courses, running bivariate correlations for the independent and dependent variables, and conducting a discriminant analysis. Discriminant function analysis will be used to determine how the dichotomous dependent variable (i.e., participation in distance learning), is predicted by the independent variables. Multiple discriminant analysis is an appropriate technique for examining the differences between two or more groups with respect to several variables simultaneously when the dependent variable is dichotomous and the independent variables are metric. The technique identifies how well

independent variables can collectively predict membership in the dependent classification variable (Hair, Black, Babin, & Anderson, 2010). In the present study, the dependent variable is participation in online teaching, and the independent predictor variables are faculty related factors and institution related factors. The analysis is descriptive in nature, with the goal of identifying the independent variables that have a strong relationship to group membership and determining the extent to which each predictor variable is important to the explained variance (Buras, 1996).

The first step in analysis will be an inspection of the data using descriptive statistics and examination of graphical representations. Inspection of a data set can help identify input errors, and add soundness to findings (Wilkinson, 1999). Split sample validation techniques will be used to avoid overestimation of the model and to validate the classification prediction. Split sampling allows researchers to cross validate results and improve the external generalizability of a study.

For the analysis, the independent variables will be grouped into blocks based upon prior literature and the conceptual framework of the study. The blocks will be entered based upon their perceived importance. The literature has established that intrinsic motivators toward online teaching, particularly concern for student learning and interest in high levels of student interaction, are the strongest for faculty (Dillon & Walsh, 1992; Maguire, 2005; Wolcott, 2003), so variables related to interest in teaching were entered in the first block and variables related to student-centered pedagogy will be entered in the second block. Because extrinsic factors related to institutional context may threaten faculty perceptions of their autonomy, competence, and relatedness and act as barriers to growth and to the adoption of new processes (Labach, 2011; Maguire, 2009; Schifter, 2000), variables related to autonomy and control will be entered in the third block. The fourth block contains the CIRP stratification variable. This variable designates institutional type in rough equivalence to Carnegie classifications and is used to represent and control for differences in institutional mission that may influence faculty participation in online teaching. Institutional support has been shown to be a facilitator for faculty of participation in online teaching (Gannon-Cook, 2003, Maguire, 2005), so the fifth block includes variables related to faculty development and rewards for using instructional technology. The sixth block of variables accounts for characteristics of faculty member's professional career, including academic rank, full-time status, institutional type, and institutional control. Appendix A depicts each block for the discriminant analysis, illustrating the alignment with research questions and variable descriptions.

Location of Study
Off-site. Electronic access to the data set is desired.

Dissemination
The results will be published in a dissertation in partial completion of the requirements for the Doctorate of Education in Educational Leadership degree at the University of North Florida, which includes publication in the institution's Digital Commons. The principal investigator may also submit articles to academic journals about this work. It is anticipated that the dissertation will be completed and published by May of 2015.

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APPENDIX A

Research Question		VARIABLES	
RQ1	**BLOCK 1** INTEREST IN TEACHING	IMPTRTS2 TCHACT07 PROFDEV01	Teaching Importance Participated in a teaching enhancement workshop Paid workshops outside the institution focused on teaching
RQ2	**BLOCK 2** STUDENT-CENTERED PEDAGOGY	EVALMETHOD06 EVALMETHOD08 INSTMETHOD01 INSTMETHOD02 INSTMETHOD06 INSTMETHOD09 INSTMETHOD10 INSTMETHOD12 INSTMETHOD14	Student presentations Student evaluations of each others' work Class discussions Cooperative learning (small groups) Group projects Student-selected topics for course content Reflective writing/journaling Electronic quizzes with immediate feedback in class Using student inquiry to drive learning
RQ3	**BLOCK 3** AUTONOMY AND CONTROL	SATIS08 SATIS15 INSOPN15	Autonomy and independence Freedom to determine course content Faculty are sufficiently involved in campus decision-making
	BLOCK 4 INSTITUTIONAL TYPE	STRAT	CIRP stratification
RQ4	**BLOCK 5** INSTITUTIONAL CLIMATE	INSTDESCR02 INSTDESCR08 INSTDESCR09	The faculty are typically at odds with campus administration Administrators consider faculty concerns when making policy The administration is open about its policies
RQ5	**BLOCK 6** INSTITUTIONAL SUPPORT	PROFDEV07 INSOPN20 INSTDESCR07	Received incentives integrate new technology into your classroom There is adequate support for faculty development Faculty are rewarded for efforts to use instructional technology
	BLOCK 7 PROFESSIONAL DEMOGRAPHICS	ACADRANK TENURE DEGYR APPTYR TENUREYR MAJOR DEPT	What is your present academic rank? What is your tenure status at this institution? Year of highest degree now held: Year of appointment at present institution: If tenured, year tenure was awarded: Major of highest degree held - General Area Department of current faculty appointment - General Area

Miller, Deb

From:	Kevin Eagan
Sent:	Thursday, July 24, 2014 11:48 AM
To:	Miller, Deb
Subject:	Re: HERI Data Request Status
Attachments:	MILLER - Research Agreement.pdf

Deb -

I misrepresented your status in my earlier letter (though the fee was correct). Here is a revised acceptance notification.

July 24, 2014

Dear Deb,

The HERI Data Access Committee has approved your proposal entitled ?Analyzing the Effect of Organizational Context on Faculty Participation in Online Teaching." The committee has agreed to provide access to the 2010-2011 HERI Faculty Survey dataset.

In addition, please note the following:

1. You are approved to conduct only the research for the
outcomes described in your revised proposal. Any additional research must be applied for and approved of by the Higher Education Research Institute before any research takes place.

2. You are responsible for obtaining local institutional
research board approval for your research.

3. We ask that you provide HERI with a copy of your research
product (published paper, conference presentation, dissertation, etc.)

4. You will be asked to sign a research agreement before we will
provide you with access to the data (see attached).

5. This data access is granted for a period of one year from when
you actually receive the dataset. After a year, we will require a
status update and will grant another year extension if necessary.
After two years, your access expires. If you need to extend access at that time you must reapply for another proposal review.

6. As a doctoral student, your data access fee is $600.

Please sign and return (email is preferred) the attached research agreement. Upon receipt of your signed research agreement, I will begin building your dataset.

Best,
Kevin

Kevin Eagan, Ph.D.

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<u>Selected Publications and Presentations</u>

Miller, D., Lerman, J. (2014). *Developing Faculty Experts in Distance Learning: Unanticipated Benefits*. Presented at the 20th Annual Online Learning Consortium International Conference. Orlando, FL.

Miller, D. (2013). *A tutorial on logistic regression: Sorting through the maze of fit statistics, coefficients, and plots*. Paper Presented at the Eastern Educational Research Association annual conference. Sarasota, FL.

Roberson, L. & **Miller, D.** (2012). *Preparing Faculty to Teach Online: An Innovative, Blended Approach*. Presented at the 18th Annual Sloan Consortium International Conference on Online Learning, Orlando, FL.

Miller, D. (2012). *Social Media Savvy: Promoting Public Health*. Presented at the 3rd Annual Public Health Conference, Jacksonville, FL.

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Miller, D. F. & Soles, E. C**.** (2005). *Finding Focus: Blackboard Workshops for Faculty***.** Presented at 2005 Blackboard Southeast User's Group. Savannah, GA.

Miller, D. F. & Soles, E. C. (April, 2005). *Engaging Students in Online Courses.* Presented at 16th International Conference on College Teaching and Learning. Jacksonville, FL.

Honors and Awards

2009 EDUCAUSE Jane C. Ryland Fellowship
2000 Program Excellence Award
International Technology Education Association