FACULTY AND THE ENGAGED INSTITUTION: TOWARD UNDERSTANDING MOTIVATORS AND DETERRENTS FOR FOSTERING ENGAGEMENT

DISSERTATION

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ABSTRACT

The purpose of this dissertation is to present a holistic approach to understanding the activities that constitute faculty engagement. After setting an historical context for the public service roles of higher education and the faculty, the author defines specific activities involving service-learning, community-based research and certain forms of professional and public service as the package of engaged faculty work. The main research questions of the study involve investigating the ways faculty participate in engagement-related activity and the frequency; exploring the variables which help explain engagement behavior; and, understanding how faculty perceive and experience engagement. The Survey of Faculty Engagement (SFE) was developed for the purposes of this study and was piloted at a large Midwestern land-grant institution. The survey was based on the author’s development of a conceptual model to understand engagement, the Faculty Engagement Model (FEM). Another main research question of the study was whether the SFE instrument confirmed dynamics hypothesized based on previous literature.
Quantitative methodology was employed to address these research questions. Overall, findings indicate that faculty at the pilot site participate in engagement activity but choose to pursue the forms of engagement that are the least time intensive, namely public service and outreach and engagement-oriented professional service. Additionally, while many of the variables that have been investigated in previous literature were significant in explaining engagement behavior, others, such as motivation, values, gender and race/ethnicity, were not. It is postulated the some of the differences in expected versus actual outcomes are attributable to the fact that the pilot study took place at a RU/VH (very high research activity) institution and previous literature does not focus exclusively on faculty engagement behavior within this institutional type. The FEM proved to be a good starting place for explaining engagement behavior, yet more research needs to be done to continue testing and refining the model.
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CHAPTER 1
INTRODUCTION

Since the founding of Harvard in 1636, American universities have existed, in part, to serve the needs of society (Bringle, 1999). Today, however, many leaders are calling on American higher education to reclaim the service aspect of its historical identity and purpose (Gonzalez & Padilla, 2008). In recent years, there has been much attention paid to a similar notion of public welfare in higher education, or higher education’s role in fostering the public good (Bok, 2003; Boyer, 1990, 1996; Chambers, 2005; Cohen, 1998; Ehrlich, 2000; Kezar, 2004). This current concern for the public role of higher education stems from several shaping forces, including soaring tuition costs, public distrust, neoliberal tendencies and a lack of congruency among societal expectations and institutional priorities (Cohen, 1998; Chambers, 2005; Giroux, 2003; Lynton, 1995; Thelin, 2004). Organizations such as the National Association of State Universities and Land-Grant Colleges (NASULGC), The American Association for the Study of Higher Education (ASHE), American Association of Colleges and Universities (AACU) and Campus Compact are calling for higher education’s reclamation of its ‘social covenant’ on the local, regional, state and national level. Such calls to action are central to current perspectives on the role or purpose of higher education today.
The focus of this study is engagement, or the role of colleges and universities in addressing important social issues while preparing an educated citizenry for today’s civic, economic and cultural demands (Chambers, 2005). Some argue that over the past few decades, higher education has become too concerned with adapting business management models and building relationships with industry. As a result, many leading scholars are now drawing attention to the unmet aims of the social role of the academy—how higher education functions both as a public good and for the public good (Chambers, 2005; Chomsky, 1994; Ehrlich, 2000; Giroux, 2003; Kezar, 2004). These scholars are calling for “even deeper reflection about who we are, where we’ve been, and where we’re going”, insisting upon a more globalized approach for understanding engagement and social responsibility in an interconnected yet stratified world (Langseth, 2004, p. xvi).

Within broad engagement efforts, there have been distinct movements: one aiming to get students involved in the community and to prepare students for responsible citizenship and another examining the role of faculty and administration in fostering engagement. It is within the latter context where I situate my work. Given the central role faculty play in teaching students and fostering their development as well as conducting research that promotes the public good, this study is designed to examine faculty personal characteristics as well as professional and institutional factors related to participation in engagement. Specifically, in the absence of a widespread theoretical model for explaining faculty participation in engagement, the purpose of this work is to develop and test a faculty engagement framework. What dynamics impact faculty and their decision to participate in engagement? What motivates faculty members to conduct community-
based research, to develop a service-learning pedagogy and to participate in public or engagement-oriented professional service? What deters faculty members from initiating these activities?

**Engagement, The Engaged Campus and The Scholarship of Engagement**

The current engagement ‘movement’ has been a long time in the making. A renewed interest in higher education as a public work began in the 1960’s with what is now called service-learning, followed by the mid-eighties formation of the Campus Outreach Opportunity League (COOL) and Campus Compact (Vogelgesang, Denson & Jayakumar, 2005). In the early to mid-nineties engagement became a widespread concept, phenomena and movement (Voglegesang et al., 2005; Ward, 2003). At that time, momentum was growing for a national community service movement and that momentum, coupled with great interest in Ernest Boyer’s 1990 *Scholarship Reconsidered*, laid the groundwork for current calls to action.

*Engagement*

Boyer’s work and the work of Campus Compact helped the engagement movement gain energy (Chambers, 2005; Ehrlich, 2000; Gumport, 2001). Then, in 1995, ASHE gave wide visibility to engagement by dedicating its annual conference to “The Engaged Campus.” Shortly thereafter, Campus Compact attempted to re-institutionalize the public service mission of higher education. NASULGC sponsored a commission on the future of state and land-grant universities. One result of this commission, The 1999 Kellogg Commission report, *Returning to our Roots*, advanced the contemporary discussion of engagement in American higher education (Voglegesang et al., 2005; Ward,
Within the Kellogg Commission’s 1999 report the term ‘engagement’ is first formalized. Here, engagement is “the newest expression of the university doing things in the society that houses it, whether the university is a public or private institution. More than outreach, service or extension, the connotation of engagement is explicitly a two-way street” (p. 33). Engagement occurs when institutions redesign “their teaching, research and extension and service to become even more sympathetically and productively involved with their communities, however community may be defined” (Kellogg Commission, 1999, p. 23). Results from the work of the W.K. Kellogg Foundation lead to the creation of the Kellogg Forum on Higher Education for the Public Good, which continues today to support the movement to restore higher education’s civic mission (Gonzalez & Padilla, 2008).

In the new millennium, Campus Compact also presses forward as a leading force in the movement, especially for research universities, through its co-sponsorship of a 2005 Conference on Research Universities and Civic Engagement and the publication of two landmark investigations of engagement at Research Universities: the 2006 New Times Demand New Scholarship: Research Universities and Civic Engagement-A Leadership Agenda and the 2007 report New Times Demand New Scholarship II: Research Universities and Civic Engagement-Opportunities and Challenges.

The Engaged Campus

Building upon the Kellogg Commission report, the American Association of State Colleges and Universities (AASCU) hones the idea of ‘the engaged campus.’ In 2002 AASCU defined the engaged institution as “fully committed to direct, two-way
interaction with communities and other external constituencies through development, exchange and application of knowledge, information and expertise for mutual benefit” (AASCU, cited in Votruba, 2005, p. 265). Others have tried to define the engaged campus by identifying key organizational activities, characteristics and/or behaviors. Ward (2003) and Holland (1997) characterize the engaged campus as demonstrating administrative and presidential commitment to community involvement, faculty research/teaching tied to community aims and student involvement in the public domain. Throughout the literature the engaged campus refocuses and builds upon higher education’s historical contribution to society, recognizing that American higher education has historically held a strong connection to societal purposes (Campus Compact, 2007). Moreover, the engaged campus is described as engaged not simply through ad hoc activities but consistently and strategically within and among the teaching, research and service functions. “The engaged campus reorients the core functions of academe—teaching, research and service—to focus on the needs of the local communities” (Ward, 2003, p.14).

The Scholarship of Engagement

The engagement movement also focuses on the role of faculty in cultivating an environment in which institutions serve as citizens to their communities. The terms engagement and the engaged campus have laid the groundwork for “the new conversations current in higher education that seek to elevate and acknowledge faculty service roles and their connections to scholarship, faculty disciplinary expertise, and campus missions” (Ward, 2003, p. 4). Engagement and the engaged campus, as concepts,
encompass and recognize the possibility that faculty service roles have a place in scholarship and scholarly work (Boyer, 1996; Diamond & Adam, 1995; Lynton, 1995).

The scholarship of engagement stems out of AAHE’s work in the early nineties that established a new program, the Forum on Faculty Roles and Rewards, to help campuses work on issues surfacing from reconsiderations of university reward systems and faculty priorities. Boyer’s (1990) *Scholarship Reconsidered* spurred AAHE’s efforts (Lynton, 1995). Here, Boyer challenges the traditional notion of scholarship as too narrowly defined (Diamond & Adams 1995; Voglegesang et al., 2005; Ward, 2003). In a critique of the then current ideologies of what constitutes scholarship, Boyer advances a new conceptualization of scholarship with four key functions: discovery, integration, application and teaching.

In Boyer’s (1990) conceptualization of scholarship, faculty work is connected to the purpose and mission of the engagement movement. “Engagement grows out of the notion of the scholarship of application…the scholarship of engagement provides a model to integrate all the other aspects of scholarship. That is, it is possible through an integrated view of faculty work to see all work categorized as the scholarship of engagement” (Ward, 2003, p. 12). Later, Boyer (1996) discussed the scholarship of engagement in this way:

At one level, the scholarship of engagement means connecting the rich resources of the university to the most pressing social, civic, and ethical problems, to our children, to our schools, to our cities, just to name the ones I am personally in touch with most frequently…at a deeper level, I have this growing conviction that what’s needed is not just more programs, but a larger purpose, a larger sense of mission, a larger clarity of direction in the nation’s life as we move toward century twenty-one. Increasingly, I am convinced that ultimately, the scholarship
of engagement also means creating a special climate in which the academic and civic cultures communicate more creatively with each other, helping to enlarge what anthropologist Clifford Geertz describes as the universe of human discourse and enriching the quality of life for us all. (Boyer, 1996, cited in Ward, 2003, p. 227-228).

This definition of the scholarship of engagement offers a perspective of scholarship in light of the engagement movement. Rather than emphasizing the traditional view of the scholarship of discovery, Boyer attempts to demonstrate the merits of other forms of scholarly work. Engaged scholarship is not community outreach that faculty take on to supplement their primary research and teaching responsibilities (Colbeck & Wharton-Michael, 2006). Engaged scholarship, also termed “public scholarship” by Colbeck & Wharton-Michael (2006) and others, reframes academic work as an inseparable whole. The National Review Board for the Scholarship of Engagement defines engaged scholarship as “faculty engaged in academically relevant work that simultaneously fulfills the campus mission and goals, as well as community needs…[It] is a scholarly agenda that incorporates community issues that can be within or integrative across teaching, research and service” (Sandermann, 2003, cited in Campus Compact, 2007, p. 9).

Engagement, the engaged campus and the scholarship of engagement likely have, and should have, varying meanings within institutions consistent with each university’s mission and culture. Yet, the conceptual framing presented in this study helps provide a general understanding of engagement efforts. This framework begins to demonstrate the central role of faculty in these efforts, even while the elements that constitute engagement are too often still vaguely understood.
Statement of the Problem

While many scholars have called for higher education to reclaim its social covenant, little is known about how, and to what degree, faculty participate in engagement. What individual, professional and institutional influences motivate faculty participation in engagement activities? What influences deter? Important questions about faculty service and engagement are just beginning to evolve. Because interest in faculty engagement is relatively new, the literature on faculty participation in engagement is limited. Most of the literature and research informing an inquiry on faculty engagement is focused on faculty participation in discrete engagement-oriented activities rather than a more comprehensive approach of looking at forms of engagement emerging out of the teaching, research and service mission of faculty. Because many studies informing an understanding of faculty participation in engagement are based upon investigations of discrete engagement activities (e.g., service-learning, community-based scholarship or public service), any researcher interested in understanding faculty participation in engagement, broadly defined, is left to assume that results from research on service-learning, public service or community-based scholarship pertain to this broader view and construct of faculty engagement. That is to say, it is presumed that the results from these bodies of literature are not exclusive to a particular form or mechanism of engagement. However, without a comprehensive study considering a set of engagement behaviors (service-learning, community-based research and public and engagement-oriented professional service), there is still a lot to learn and discover about the factors impacting
faculty participation. Moreover, there is no instrument used to specifically measure a wide-ranging faculty engagement construct.

Statement of Purpose

In efforts to build on the current body of research, the purpose of this study is to examine how faculty participate in engagement while identifying key factors related to engagement participation. Building upon research that has considered the organizational, personal and professional variables related to the service-oriented involvement of faculty, this study takes a more complete approach to defining and explaining engagement behaviors by constructing a faculty engagement model (FEM)\(^1\). This model is then used to develop a new instrument for exploring faculty levels of engagement participation.

Research Questions

Faculty engagement is defined here as community-based research (research dimension); service-learning (teaching dimension); and, forms of public and professional service (service dimension) that promote the public good. The study addresses the following questions:

*Research Question 1:* How do faculty participate in engagement-related activity, and how often?

*Research Question 2:* When considering community-based research, service-learning, and, some forms of public and professional service activities as ‘the’ package for engaged faculty work, what variables help explain behavior? Are there patterns related to: (a) Gender?

\(^1\) The FEM is presented in Illustration 2.1 on page 46.
(b) Race/Ethnicity?
(c) Faculty Status/Rank?
(d) Discipline?

Research Question 3: How do faculty perceive and experience engagement?
a) To what extent do faculty feel engagement is supported by their discipline? By their professional organizations? By their current department? By their institution?
b) What conditions would motivate faculty to expand engagement involvement? What conditions deter?

Research Question 4: How useful is the conceptual model developed for this study in explaining engagement?
(a) Do the main dimensions of the model, or the constructs of personal, professional and institutional factors, hold when subjected to a factor analysis test?
(b) Do the conceptual model and survey derived from it identify meaningful variables?
(c) Does the survey instrument confirm dynamics hypothesized in the development of the model or are there inconsistencies in the model based on the results of the survey?

Significance

This study makes several contributions to the field. First, unlike previous studies, it provides precise definitions and measurement parameters for engagement. Through the development of a new instrument to assess faculty engagement and the collection of new data, it provides information on the contexts through which faculty are engaged. It takes an in-depth look at the various personal, professional and institutional factors related to participation, which can be used in the future for institutional decision-making.
Methodology

Because multivariate approaches make it possible to ask specific and precise questions of considerable complexity, this study is mostly quantitative in nature. The approach began with the development of a special purpose survey, the Survey of Faculty Engagement (SFE), which was piloted at a large Midwestern land-grant university. The survey, in addition to measures related to allocation of time, asked specific questions associated with the activities identified through the conceptualization of faculty engagement developed in this study. It assessed whether faculty members have collaborated with the local community in research/teaching, taught a service-learning course and engaged in public or professional service with a public benefit outcome. The SFE also asked questions related to personal and professional factors that motivate and deter faculty members from participating in engagement. Data from the survey were used to evaluate the appropriateness of the FEM by conducting an exploratory factor analysis. Finally, regression techniques were applied to learn more about the nature, strength and direction of the relationships among the dependent and independent variables.

Overview of Chapters

The purpose of this chapter is to introduce the reader to engagement, concepts related to engagement and position the research question within a problem statement while highlighting the potential relevance of the research. Chapter 2 provides the background literature informing the study. Theoretical and historical perspectives on public service as a core function of the academy and faculty roles are examined. Chapter
2 is also intended to more fully discuss existing research on the personal, professional and institutional factors impacting engagement. Chapter 2 concludes with a presentation of this study’s model. Chapter 3 outlines the specifics of the methodological approach and the research design. In Chapter 4 the results of the study are presented and Chapter 5 provides a discussion of the results and implications for practice and future research.
Glossary of Constitutive Definitions

The following is a list of definitions that are used in this study and relate to faculty engagement.

1. **Community**-The term community is “vast and ill-defined” in the engagement literature (Lynton, 1995, p.V.). Campus Compact states that “community can be used in a number of ways to apply to almost any group of individuals” (http://www.compact.org/about/detail.php?id=20#). In the Compact’s work as well as much of the current engagement literature, community is used to describe local geographic and face-to-face engagement/interaction. “Such communities exist all around us in our neighborhoods, our schools, our workplaces, our campuses, etc.” (http://www.compact.org/about/detail.php?id=20#). For the purposes of this work, a broader conceptualization of community, understood as the local, university district community as well as community at regional, state and national levels is used. Because the study takes place at a large Midwestern land-grant institution, it is understandable that the reach of such institutions should be felt at multiple levels of community. Here, community is broadly defined except where local community is explicitly stated.

2. **Community-based research**-“Community-based research (CBR) is research conducted by, for, or with participation of community members (LOKA Institute). The community generates the research question and is an active participant at every step of the research process. CBR differs quite dramatically
from traditional research in that it is done with the community not to the community and the goal of the research is to produce information that will help the agency better serve its clientele (Strand, 2000). The community is the expert when it comes to understanding the problem and the researcher is there to supply technical support (http://www.apa.org/ed/slce/infusion.html). In this study, community-based research is defined as scholarship that involves collaboration with community members to address community needs. Community-based research is applied research and may include student involvement.

3. **Service-Learning**—Service-learning is a teaching pedagogy or form of experiential learning that incorporates community service. As Campus Compact notes, service-learning involves activity focused on meeting a human need in the community where that need has to do with the well-being of individuals and/or of the environment in which they live. Bob Bringle and Julie Hatcher define service-learning as “a course-based, credit-bearing educational experience in which students (a) participate in an organized service activity that meets identified community needs and (b) reflect on service activity as a means of gaining a deeper understanding of course content, a broader appreciation of the discipline, and an enhanced sense of civic responsibility” (Bringle & Hatcher, cited by Campus Compact at http://www.compact.org/about/detail.php?id=20#). Within this work, service-learning is defined as a course-based educational experience where an organized
service activity meets community needs while developing academically-based skills and knowledge.

4. **Professional Service**- One of the more debated distinctions in the current body of literature deals with the definitions of professional versus public service. In its simplest form, professional service is “work by faculty members based on their scholarly expertise and contributing to the mission of the institution. Through outreach a university or a college becomes a direct intellectual resource for its external constituencies” (Lynton, 1995, p. 1). Campus Compact provides a useful conceptual framework: “Professional service, along with teaching and research, is generally considered one of the three elements of faculty scholarship…[when] professional service: 1) contributes to the public welfare or the common good, 2) calls upon faculty members’ academic and/or professional expertise, and 3) directly addresses or responds to real-world problems, issues, interests, or concerns” (http://www.compact.org/about/detail.php?id=20#). Professional service may include/occur through: technology transfer, technical assistance, policy analysis, program evaluation, organizational development, community development, program development, expert testimony, public information (Lynton, 1995). Here, professional service is categorized as engagement when a faculty member uses his/her disciplinary expertise to collaborate with the community and address or respond to societal needs, problems, issues, interests, or concerns.
5. **Public Service** - Public service is often a catch all for the service activities of faculty members including activities that fulfill institutional and disciplinary citizenship. Here, public service is understood as time outside of the faculty member’s area of expertise, where time and efforts are dedicated to social causes in the community. (Lynton, 1995). In the SFE, public service is defined as time and effort outside of your field/area of expertise dedicated to collaborating with community members or organizations to meet existing community needs.
CHAPTER 2
REVIEW OF THE LITERATURE

The way faculty embrace or resist engagement-oriented activities is best understood by situating engagement within historical and philosophical frameworks. Many scholars and organizations have considered engagement in the context of the formation of the US system of higher education (Bok, 2003; Chambers, 2005; Checkoway, 2001; Gumport, 2001; Scott, 2006). Taking an historical look at public service as a core function of academe as well as the relationship between faculty work and the needs of society provides a meaningful framework for understanding the current engagement movement.

Another important component of this chapter is a discussion of the literature related to institutional, personal and professional factors that impact faculty engagement behavior. Studies about faculty and participation in engagement activities provide context for the specific research questions explored. This chapter concludes by unveiling the conceptual model of the factors influencing faculty participation in engagement. The model serves as a synthesis and critique of the current body of literature and informs the design of the Survey of Faculty Engagement (SFE).
Tracing Public Service as a Core Function of the Academy

“Reading history is thus essential for those who would reform higher education” - Cohen

As far back as the founding of Harvard University in 1636, institutions of higher education have served an important and distinguished role in society. As centers of research, learning, cultural revolutions, promotion of the public good and job-training, American higher education has changed dramatically in order to meet the changing needs of society. Tracing the historical role of public service legitimizes engagement, or as Lynton (1995) suggests, “a renewed need for an old tradition” (p. 5).

The Colonies and The New Nation (1636-1860s)

Commitment to service has been cited as a fundamental characteristic of American higher education (Chambers, 2005; Cohen, 1998; Ehrlich, 2000; Scott, 2006; Thelin, 2004). During the colonial era the purpose of postsecondary education was to cultivate the next group of religious and civic leaders to benefit society as a whole. Colonial higher education served its community by socializing the young for positions of leadership while preparing students to become public servants. Harvard was founded to “advance piety, civility, and learning” (Cremin, 1970, cited in Ward, 2003, p. 18) and William and Mary was charted to prepare public and civil servants (Cohen, 1998; Thelin, 2004; Ward, 2003). These early institutions “developed around notions of acculturating the young, passing on the wisdom of the classics, and preparing people not only for service as clergymen but as public servants as well” (Cohen, 1998, p. 16).

The establishment of higher education as a prominent social institution early in this era set the precedent for town and gown relationships. One way this occurred was
through the structure of colonial institutions. Institutional board members, serving as representatives of the colony and public at large, are a perfect example of the distinctly American governing structure that connected the external community with internal participants (Thelin, 2004; Mathews, 2005). The funding structure of early institutions also reinforced the college/community relationship. Even while the colonies experienced gross tax burdens to the crown, revenues were still collected and used to support civic and public services, including higher education (Cohen, 1998; Thelin, 2004).

Higher education embraced rapid change and growth throughout the first half of the nineteenth century as the local and religiously-affiliated colleges flourished and the first state colleges were established. The service missions of these institutions were fulfilled via the tight coupling of town and gown. Many colleges and communities demonstrated the societal benefits achievable and this “created the ideal of higher education as a public good” (Ward, 2003, p. 21). The first state colleges also adopted service missions and town and gown relationships thrived in these environments as well.

*University Transformation Era (1870-mid 1940s)*

If it is said that the colonial and new nation eras established public service as a core function of the academy, then the rise of the land-grant colleges turned higher education toward even broader areas of service. In terms of influence on the course of American higher education, The Justin Morrill Land Grant Act ranks among one of the most important pieces of legislation ever authorized (Cohen, 1998; Scott, 2006). In 1862, President Lincoln signed this act into law, permitting the sale of land to create state universities. The Morrill Act, in setting aside over 17 million acres of land in the public
domain, defined higher education as a public good and set the stage for what we know today as the outreach function of US higher education (McDowell, 2002).

The Morrill Act was the first in a series of legislation enabling the expansion of university service. The Hatch Act of 1887 extended the land-grant ideal to include the creation of off-site experimental stations, extending learning from campus to settings in rural communities. This was an effort to disseminate research findings and applications in a useable way for the benefit of the state (McDowell, 2002). The Smith-Lever Act of 1914 was also critical to the outreach, engagement and overall service efforts. In the early 1900s, as agricultural faculty were solving practical problems, the Smith-Lever Act formalized the outreach function of the university through the establishment of the cooperative extension program (McDowell, 2002). This act allotted federal funding to universities in support of extension outreach. In return, land-grant universities fulfilled the service or outreach mission through the development of these programs.

*Mass Education (1945-1975)*

The engagement and service role of higher education during the years of 1945-1975 was heavily influenced by vast industry growth and the defining events of the era—the GI Bill of 1944, the aftermath of WWII and advances in the Civil Rights Movement (Cohen, 1998; Thelin, 2004; Ward, 2003). Students became heavily involved in the service function (Cohen, 1998). The rise in student participation in service was largely attributable to the fact that most institutions in urban areas could not isolate themselves from the economic and social needs of the nearby community. The conditions of the era, in combination with a new culture of activism among students, led to changes in areas of
study and to the creation of more relevant community outreach and development programs (Chambers, 2005; Thelin, 2004). Service as a core function of the academy continued to flourish, especially among the student population.

At the same time, while service was still viewed as part of the purpose of universities and colleges, the importance of service was challenged by new driving forces within the larger framework of American higher education. A majority of institutions were trying to do too much and higher education found itself losing clarity of purpose. Questions such as whether institutions of higher learning should serve society or prepare graduates for the market gained visibility (Cohen, 1998). Moreover, perceptions of higher education also changed. As more and more businesses (and therefore the market) began to value a college education, the number and diversity of institutions increased, resulting in a consumerist, private good and credentializing mentality among the American public (Thelin, 2004; Ward, 2003).

*The Contemporary Era and the Current Moment (1975-present)*

Since 1975, American higher education has experienced the elevation of research as the primary function of the academy, coupled with continual but slowed growth, fierce competition and waning public support. In the beginning of the era, the research climate moved toward taking precedence over the teaching and service functions (Bok, 2003; Cohen, 1998; Duderstadt, 2000; Thelin, 2004; Ward, 2003). Competition due to economic downturn and increasing tuition costs has, in the age of accountability, led institutions to drift “toward an omnibus model in an attempt to be all things to all constituencies” (Thelin, 2004, p. 319). As institutions search for meaning, previously
established core functions of the academy have been deemphasized and lucrative functions (patents, industry partnerships) have emerged. Institutions often move quickly toward these functions in order to appeal to the masses. Higher education has found itself stuck in a place of too many promises (Cohen, 1998; Colby et. al, 2003; Kezar, 2004).

Cohen (1998) states:

Even though higher education could not deliver on all of its pledges, it has never known how to back away from them. It had made too many promises. If the billions devoted to research on social issues seemed to yield no reduction in social ills, instead of reducing their claims, the institutional representatives typically said only that they needed more money or that other institutions were at fault and should change. Never able to say merely “Send your young people here and we will teach them to be good citizens and more productive workers,” it promised also to ameliorate social problems, cure diseases, enhance the economy, relieve unemployment and show people how to be nice to one another. (p. 413)

The loss of the sense of institutional purpose in the face of budget cuts and competition has been both harmful and helpful to the service function. Although the driving forces and events early in this era worked against service, the loss of focus on traditional academic purposes began paving the way for the rise of the current engagement movement.

In the current moment of higher education, critics have spoken out and a reemphasis on the importance of higher education’s relationships with the broader community is often a leading premise of institutional focus across academe (Checkoway, 2001; Cohen, 1998; Colby et. al, 2003; Kezar, 2004; Giroux, 2003; Gumport, 2001). Today higher education has to do more with less while answering to a critical audience. One mechanism for answering calls for accountability and public scrutiny is to demonstrate and reemphasize the social role of higher education (Ward, 2003).
Engagement, as conceptualized and depicted in the introduction, is being advanced as a positive step toward reestablishing higher education as a community serving internal and external constituents—a social organization that fosters knowledge advancement for the public good. The public is seeking greater engagement from the academy, looking upon higher education to address social issues by framing research agendas in ways that address the needs of society (Braskamp & Wergin, 1998, cited in Ward, 2003). Facing higher education today is “concern about what academe does and for whom, and at what cost” and colleges and universities must act as “social institutions embedded in a wider society and subject to society’s constraining forces” (Ward, 2003, p. 44). Among the disjunction between campus and community, cost concerns, calls for accountability and questions of curriculum and student workforce preparedness, engagement has gained momentum and support (Ward, 2003). There are strong forces attempting to reinstate service as a core function of the academy.

**Historical Perspectives of Faculty and The Service Role**

The roles and responsibilities of those who work and lead within academe have also been defined in light of service as a guiding principle. Here, a closer look at the connection between faculty and the service role is explored.

Similar to service in general, service as a core function of faculty work has always existed in American higher education. During the colonial era, faculty positions existed to support the public good. Members of the clergy held most if not all of the faculty positions and this role was neither highly desirable nor well remunerated (Thelin, 2004). “Unlike lawyers or physicians who expected to be paid for their ministrations, faculty
were more like volunteers engaged in public service” (p. 27). In its earliest form, the American faculty position was indistinguishable from the public service role of higher education. Service was not simply a faculty expectation; rather, the faculty position existed to serve.

By the 1800s, permanent faculty were in place in most colleges and a trend toward the professoriate as a career, rather than a good thing to do until another opportunity came along, emerged (Cohen, 1998). The role of faculty expanded as new purposes for higher education developed. Faculty were expected to meet the needs of the time by “training for careers other than the pulpit; providing general education for an enlightened citizenry; and passing on a shared cultural heritage” (p. 71). As the role of the American scholar further transpired, faculty external activities took the form of civic and community endeavors and the service role of faculty moved beyond the religious intent (Thelin, 2004; Ward, 2003). Most professors were “leading members of the community, taking part in civic affairs, local literary societies and clubs” (Cohen, 1998, p. 73).

In the first half of the twentieth century, the faculty role continued to transform. Notable changes included a reduction in religious involvement, widespread adoption of the aforementioned service to the community role and the establishment and acceptance of a professionalized faculty. A career ladder developed and the notion of faculty loyalty to a discipline gained prominence. The new academic culture valued research and the advancement of knowledge and separated out the previously held moral and civic education principles from the concerns of the academic discipline (Colby, Ehrlich,
Beaumont & Stephens, 2003). Priorities of the professoriate shifted. By mid century, “the ethos of what it meant to be a faculty member, at all types of institutions, included teaching and research; the challenge was to strike a balance between those functions while maintaining allegiance to society and higher education’s covenant with society” (Ward, 2003, p. 33).

During the mid twentieth century a new emphasis was placed on exploring and defining the relationship between faculty and service. As faculty roles continued to become more professionalized, public service was made an explicit aspect of faculty responsibilities. Cohen (1998) notes that “the academic social scientists especially, tended to seek a voice in affairs in the broader society, and public support was on the agenda when the leading social science disciplinary associations were formed” (p. 132). While faculty research was not yet serving a critical role in informing public policy, faculty did begin taking on research endeavors with all types and levels of governmental agencies (Cohen, 1998).

In the aftermath of WWII, higher education faculty were affected by a vast growth of the federally-funded research enterprise (Chambers, 2005; Cohen, 1998; Thelin, 2004). While the “land grant movement had created partnerships between the government and higher education to produce knowledge for the common good…wartime and postwar funding expanded these partnerships and their influence on the focus and direction of higher education” (Ward, 2003, p. 38). Stemming from the heavy research emphasis, hierarchies in the disciplines emerged, especially the perception of the physical sciences as ‘the model’ for how things are done within the field. This increased tensions
and compromised the balance of teaching, research and service sought under the land-
grant ideal (Bok, 2003; Slaughter & Rhoades, 2004; Ward, 2003). At the same time the
increasing trend of part-time and adjunct appointments lead to a plateau in faculty

Today, in addition to being an era characterized by competing priorities, issues
within the faculty ranks also arise. Thelin (2004) notes that the proliferation of adjunct
faculty and untenured positions has led many to question what it means to be a scholar.
Additionally, more and more faculty members have been successful in applying for and
receiving grants from the government, companies and foundations, fostering a new sense
of independence among the faculty ranks (Slaughter & Rhoades, 2004). This
independence has in some ways helped further the importance of disciplinary bonds over
institutional bonds. The notion of service as a core function of faculty work has certainly
faced its share of challenges.

In the current era, professors are operating in an ambiguous environment where
higher education must do more with less and demonstrate accountability. One of the
major consequences of this shift in institutional priorities is that faculty allocate
disproportionate amounts of time to developing research proposals and securing grant
funds². While in the early years the societal role of faculty was clear, today faculty find
themselves amid conflicting expectations (Ward, 2003). Respected critics have advocated
that while there are no simple answers to the issues confronting the academy, the

² While some of the current research does contribute to the public good, much of what is still valued in the
academy is basic (rather than applied) research. The basic research focus often conflicts with the societal
purposes of higher education.
academy and its academics must focus on increasing their relationship with, and efforts on behalf of, the immediate needs of the broader community. Cohen (1998) states:

Boyer (1996) argued that higher education reached its finest moments when it served larger purposes, as when it participated in the “building of a more just society” and making the nation “more civil and secure” (p. 13). He deplored the scholars who viewed the campus “as a place where students get credentialized and faculty get tenured, while the overall work of the academy does not seem particularly relevant to the nation’s most pressing civic, social, economic, and moral problems.” (Boyer, 1996, cited in Cohen, 1998, p. 414)

Institutional Factors and Faculty Characteristics

Now that the historical framing for faculty engagement has been established, research and writings related to factors that influence faculty involvement in engagement are explored, beginning with attention to the organizational or institutional factors that influence engagement. Later, research on the relationship between personal and professional characteristics and faculty engagement is presented.

Institutional Factors Influencing Engagement

Understanding the role of institutional culture and the way institutions set priorities and create meaning are important considerations when assessing engagement-oriented behavior. The Holland Matrix, the Kellogg Commission’s work and Colbeck & Wharton-Michael’s 2006 conceptual model for understanding individual and organizational influences on faculty motivation and engagement in public scholarship serve as the primary contributors to the conceptual framework of this part of the literature review.
The Holland Matrix is perhaps the most developed conceptual framework for institutional factors impacting engagement. In 1997 Holland published *Institutional Commitment to Service: A Model of Key Organizational Factors* and in 2005 *Institutional Differences in Pursuing the Public Good*. Both are pivotal to understanding engagement at the organizational level. In *Institutional Commitment to Service: A Model of Key Organizational Factors* (1997), Holland (1997) advances seven organizational factors impacting engagement based on two studies; one which looked at the institutionalization of service at institutions that had self-identified as adopting distinctive missions of community-based scholarship and a second study which was intended to test and refine the matrix of factors developed in the first study. Seven organizational factors emerged from patterns and themes in the data to explain engagement at varying levels: organizational mission; promotion, tenure and hiring procedures; organizational structure; student involvement; faculty involvement; community; and, campus publications. The matrix, presented in Table 2.1, proposes the institutional factors relevant to service along varying levels of commitment. While not depicted, Holland later added three additional factors, including leadership, policy and budget allocation (internal) (Holland, 2005).
<table>
<thead>
<tr>
<th></th>
<th>Level One</th>
<th>Level Two</th>
<th>Level Three</th>
<th>Level Four</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low Relevance</strong></td>
<td>No mention or undefined rhetorical reference</td>
<td>Service is part of what we do as citizens</td>
<td>Service is a vital element of our academic agenda</td>
<td>Service is a central and defining characteristic</td>
</tr>
<tr>
<td><strong>Medium Relevance</strong></td>
<td>Service to campus committees or to discipline</td>
<td>Community service mentioned; volunteerism or consulting may be included in portfolio</td>
<td>Formal guidelines for documenting and rewarding service</td>
<td>Community-based research and teaching are key criteria for hiring and evaluation</td>
</tr>
<tr>
<td><strong>High Relevance</strong></td>
<td>None focused on service or volunteerism</td>
<td>Units may exist to foster volunteerism</td>
<td>Centers and institutes are organized to provide service</td>
<td>Infrastructure includes flexible unit(s) to support widespread faculty and student participation</td>
</tr>
<tr>
<td><strong>Full Integration</strong></td>
<td>Part of extracurricular student life activities</td>
<td>Organized support for volunteer activity</td>
<td>Opportunity for extra credit, internships, practicum experiences</td>
<td>Service-learning courses integrated in curriculum; student involvement in community-based research</td>
</tr>
<tr>
<td><strong>Promotion, Tenure, Hiring</strong></td>
<td>Campus duties; committees; little interdisciplinary work</td>
<td>Pro bono consulting; community volunteerism</td>
<td>Tenured/senior faculty pursue community-based research; some teach service-learning courses</td>
<td>Community research and service-learning a high priority; interdisciplinary and collaborative work</td>
</tr>
<tr>
<td><strong>Organization Structure</strong></td>
<td>Random or limited individual or group involvement</td>
<td>Community representation on advisory boards for departments or schools</td>
<td>Community influences campus through active partnership or part-time teaching</td>
<td>Community involved in defining, conducting and evaluating community research and service</td>
</tr>
<tr>
<td><strong>Student Involvement</strong></td>
<td>Not an emphasis</td>
<td>Stories of student volunteerism or alumni as good citizens</td>
<td>Emphasis on Economic impact, links between community and campus, center/institutes</td>
<td>Community connection as central element; fundraising has community services as a focus</td>
</tr>
</tbody>
</table>


Table 2.1: Holland’s Levels of Commitment to Service Characterized by Key Organizational Factors
Although service is defined differently in Holland’s work (limited to community-based scholarship and service-learning) than for the current study, this model appears to be transferable. The work of the Kellogg Commission helps legitimize factors advanced by Holland while better situating these factors directly within the framework of institutional type.

The Kellogg Commission seven-part test for engagement promotes an understanding of institutional factors relevant to engagement at land-grant and similarly-situated institutions. The Commission consisted of nearly twenty presidents, past presidents and chancellors of universities. In *The Engaged Institution* (1999) The Commission develops exploratory portraits of eleven institutions and their engagement activities. The report of the Kellogg Commission (1999) reinforces the centrality of the factors advanced by Holland. The Kellogg Commission’s seven-part test for engagement includes these characteristics that define an engaged campus: responsiveness to the community, respect for partners, academic neutrality, accessibility, integration of engagement into mission, coordination and resource adequacy. Organizational factors advanced by Holland (1997; 2005) are addressed here, with community involvement, mission, infrastructure/coordination and resources receiving emphasis in both works.

Moreover, the Commission recommends key strategies for developing, fostering and nurturing the engaged institution that also cross over with the factors in Holland’s matrix. The Kellogg Commission’s (1999) policy recommendations relate to mission revision, policy, evaluation of the rewards processes, the role of university leadership and faculty support and involvement. The Commission’s work, all in all, captures the same
dimensions or factors relevant to engagement in Holland’s matrix, with the exception of student involvement and campus publications. Thus, mission, leadership, the faculty promotion, tenure and reward system, policy, budget allocation, organizational structure, faculty involvement and community involvement appear to be consistent factors across two pivotal pieces of literature on institutional/organizational factors. The Faculty Engagement Model (FEM) developed for this study incorporates these factors, addressing tenure, promotion and hiring processes within an institutional policies variable.

A more recent study by Colbeck & Wharton-Michael (2006) entitled *Individual and Organizational Influences on Faculty Members’ Engagement in Public Scholarship* also provides a strong conceptual framework for understanding the impact of organizational characteristics on faculty participation in engagement activities. They focus on four institutional factors: mission, resources, norms and evaluation. These researchers suggest that evaluation is critical to understanding engagement because “the more institutional evaluations separate faculty activities and products into mutually exclusive categories, the less faculty are likely to enrich their teaching with their research, inform their research with lessons learned from the community, or involve their students in research with community partners for the benefit of the public good” (Colbeck & Wharton-Michael, 2006, p. 23). Moreover, they call attention to the effect of institutional norms on faculty activity. Linking this perspective with Holland’s (1997) work, which indicates that the aggregate level of faculty involvement occurring at an institution can describe or predict faculty engagement, it is possible to postulate a direct link between institutional norms and the likelihood of faculty participation in engagement
activities. In the FEM, evaluation is captured by the institutional policies variable and norms are assessed indirectly through the faculty involvement variable and other variables which provide insight into institutional culture and norms.

Other studies also support the inclusion of the institutional factors named above in the FEM. Almost all of the literature reviewed considered the role of institutional leadership and mission. Institutional commitment to community engagement had a positive effect on engaged scholarship (Voglegesang et al., 2005) while the service-learning literature recognizes that if there is administrative support for service, faculty members will be more likely to participate in engagement initiatives (Hink & Brandell, 2000; Ward, 1998). Bringle & Hatcher (2002) give strong emphasis to institutional mission in their work and university-level service missions were found to influence the adoption of service as scholarship in O’Meara’s (2002) study.

Institutional policies and procedures, including promotion, tenure and hiring and time allocation, all influence faculty engagement as well. Current tenure schedules and workload demands do not permit faculty members to take the time needed to incorporate service into their scholarship (Hink & Brandell, 2000) and can particularly serve as obstacles that discourage faculty participation, especially junior faculty (Holland, 1999). Boyer’s work sheds light on these policy dynamics. Based on his 1989 National Survey of Faculty, faculty appear to reject service in the framework of serious scholarship. This is likely attributable to the lack of definition or measurement parameters for this aspect of their work. Without concrete organizational definitions, policies to allocate time for
developing engaged scholarship, or a methods to account for engaged work in the promotion and tenure process, faculty have little incentive to participate in engagement.

The availability of internal funding is another organizational factor that appears to predict engagement (Holland, 2005, Ward, 1998). Funding has been shown to be important to institutionalize service-learning (Ward, 1998) and Holland (2005) suggested that engagement would be more prominent if it were part of the mission of the institution and the institutional funding process was closely related to the mission.

There is some debate in the current body of literature addressing the significance of having a centralized organizational structure to support engagement, such as an institute or center for applied research and public service programming. Most experts agree that a centralized approach, or office of outreach and engagement, is critical to institutionalizing engagement efforts (Antonio, Astin & Cress, 2000; Wolf, 1998). An alternative view may be that the centralized approach creates a ‘that’s what they do over there mentality,’ limiting the opportunity for outreach and engagement to be truly adopted and part of an institution’s culture.

The research also suggests additional factors for consideration. Antonio (2002), Antonio et al. (2000), Hurtado, Ponjuan & Smith (2003) and Voglegesang et al. (2005) account for institutional type in the analytical models of their studies. The research seems to be fairly consistent in that it indicates that private, two-year and religiously affiliated institutions are more likely to engage with the community. Private institutions tend to have higher proportions of faculty who support the college’s role in promoting community service among students (Antonio et al. 2000) and faculty at private
universities, and catholic or religious institutions demonstrate higher levels of engaged scholarship as compared to those at public universities (Vogelegesang et al. 2005). Faculty at universities conduct, use, and value community service at rates lower than those faculty at two-year and four-year colleges (Antonio, 2002). Moreover, institutional prestige and whether that contributes or detracts from the level of engagement in community programs is also an area of interest. Priority for increasing institutional prestige was positively and significantly associated with engagement-related work in The Diverse Democracy Project (2003). Yet, Antonio et al. (2000) and Voglegesang et al. (2005) find that commitment to service tends to be weaker, at least at the individual faculty member unit of analysis, at more selective/prestigious universities. Both institutional type and prestige are represented in the FEM.

A review of institutional factors related to engagement would not be complete without considering the importance of community buy-in or involvement in the development of outreach and engagement agendas. Bringle & Hatcher (2002) explore the nature of town and gown relationships. They highlight external expectations as one of three primary factors influencing engagement while recognizing that institutions have relatively little control over communal factors. Bringle & Hatcher’s (2002) emphasis on external expectations, similar to Holland’s (1997) community involvement and Kellogg’s (1999) respect for partners, acknowledges that the community can impact the level of engagement reached. Recognizing communal factors as important in explaining engagement honors the theoretical underpinnings of engagement as a two-way street.
Faculty and Engagement Behavior

In the traditional educational balance of research, teaching and service, faculty are often least rewarded for their service work (Jaeger & Thorton, 2006; Lynton, 1995; O’Meara, 2002; Ward, 2003). Because service is not encouraged through the traditional university rewards systems, it is important to look at the personal characteristics of faculty and professional dimensions to better understand how such factors relate to engagement. Little research about the personal factors that influence faculty engagement and service exists because interest in the topic is recent. While there is not a comprehensive body of literature, based on the work that has been done, one can hypothesize with some certainty that personal characteristics make a difference.

One of the most prominent themes in the research is that faculty of color are more likely to value engagement-oriented activities than white faculty (Antonio, 2002; Antonio et al., 2000; Baez, 2000; Hurtado et al., 2003; O’Meara, 2002; Voglegesang et al., 2005). In a study using the Higher Education Research Institute’s (HERI) National Faculty Survey data, Antonio et al. (2000) suggest that distinct differences exist among racial groups when considering participation in public service. In their study, only race remained statistically significant when controlling for personal commitment to service. Antonio et al. (2000) found that white faculty members tended to demonstrate a lower commitment to service than faculty of color.

Voglegesang et al. (2005) arrive at a similar yet less distinct conclusion. In this study, which also uses data from the HERI Faculty Survey, the two primary research questions are whether faculty use scholarship to address local needs and whether they
have collaborated with the local community in research/teaching. The highest percentage of faculty, by ethnic group, to collaborate with the community in teaching was Indian/Alaskan, followed by White, then Black and Asian and lastly, Hispanic. Black and Indian/Alaskan natives were the two minority populations most likely to use scholarship to address community needs.

Some scholars are critical of the prominence of faculty of color and participation in service, especially since service is not highly valued within promotion and tenure processes. These researchers note that faculty of color often have greater time constraints for service work than white faculty because increased institutional and external demands exist (Baez, 2000; Tierney & Bensimon, 1996; Tierney & Rhoads, 1993). Other scholars suggest that minority faculty participate more heavily in service because they hold different beliefs and expectations about the role or purpose of higher education and its contributions to society and because they reap significant personal benefits from engaging in this work (Antonio et al., 2000; Baez, 2000; Gonzalez & Padilla, 2008). Thus, another dimension emphasized in the literature is whether minority faculty are more likely to participate in service because of institutional demands or because of a different set of values and beliefs.

Motivation and values seem to encourage faculty of color to take personal responsibility for engagement. The largest absolute and relative difference between minority and majority faculty in Antonio’s (2002) study is motivation for entering the professoriate. Faculty of color are 75 percent more likely than white faculty to pursue a position in the academy because they draw a connection between the professoriate and
the ability to affect change in society (Antonio, 2002). Antonio (2002) states that “in most cases, it is the value orientation that faculty of color bring to the academy that distinguishes their greater involvement in, and support of, activities reflective of the scholarship of …application” (p. 598). Baez’s (2000) study also supports this notion. He found that service was a salient concern for a majority of the minority faculty members in his study and that although faculty members knew that other criteria were considered more important in their evaluations, service took on a significant role in their day to day lives. Race-related public and professional service, or service opportunities that had a race, diversity or social justice intent, presented faculty in this study with the most challenges because they felt compelled or driven to participate in activities they believed would benefit their race or ethnic communities. A recent book by Gonzalez & Padilla (2008), which focuses on Latino/a commitment to public scholarship through the lenses of personal reflection and autoethography, stresses this same notion, specifically among Latino/a faculty.

Another finding identified in the research is that women faculty are more likely to participate in service than their male counterparts (Antonio et al., 2000; O’Meara, 2002; Hurtado et al., 2005). Antonio et al. (2000) report that higher proportions of women perform service. Their study also indicates that women are five times as likely to teach courses with a community service requirement. O’Meara (2002) found that ninety percent of the faculty who self-identified as being involved in service scholarship were women. The work of Voglegesang et al. (2005) provides further support for such findings. They found that women are substantially more likely than men to report the use
of scholarship to address community needs. Women also report higher rates for collaborating with the community in teaching and research than men.

Similar to race, it is plausible that gender and beliefs about the role of higher education are inextricably linked, and that gender is not as important as a personal belief system or a conviction about the social purpose or role of higher education. For example, 84 percent of women versus 79 percent of men agree somewhat or strongly that colleges should work with the community (Voglegesang et al., 2005). Women are more likely to believe it is very important or essential to prepare students for responsible citizenship (Voglegesang et al., 2005). Antonio et al. (2000) find that 60 percent of women faculty endorse service as a graduation requirement. Such findings may indicate that women place a different emphasis on service than men. Uncertain, however, is how much of this difference is actually related specifically to gender and the extent to which a service-oriented belief system moderates this relationship. Also uncertain is the level of interaction among gender and service with other personal and professional factors. One study found that unlike minority status, when controlling for personal and professional dimensions, strong correlations between gender and service no longer exist (Antonio et al., 2000).

Most studies to date have considered personal belief systems as a variable (Antonio, 2002; Antonio et al., 2000; Voglegesang et al., 2005). While it is hypothesized that in order for faculty members to have integrated academic lives they must find personal value in their scholarship and service (Boyer, 1990; Ward, 2003), less is known about the personal beliefs that make a difference and how those beliefs are related to
other factors. In Antonio’s (2002) study, personal value system is controlled by creating two main orientations; a social change orientation and status orientation. A status orientation is defined here as the faculty member: 1) believing that his/her institution should try to climb the academic ladder; 2) placing a high value on traditional forms of scholarship; and, 3) exhibiting a personal drive for prestige. A status orientation was negatively associated with service. Antonio et al. (2000) develop a similar values dichotomy with the constructs of a humanistic orientation and intellectual orientation. In this study, humanistic orientation is the personal characteristic most strongly associated with commitment to service. Conversely, a strong intellectual orientation is associated with a weak commitment to community. These outcomes are consistent with Holland’s (1997) statement that the primary origin for faculty participation in service is personal values. The same theme emerged in research by Jaeger & Thorton (2006).

Epistemology is postulated as a personal factor impacting faculty participation in engagement in the theoretical work of Colbeck & Wharton-Michael (2006) and also stressed in the autoethnographies in Gonzalez & Padilla (2008). Colbeck & Wharton-Michael contend that epistemology, or a person’s understanding of the nature and development of knowledge, could be helpful when considering faculty engagement in public scholarship. They state:

Individuals who believe that knowledge is absolute and should be obtained through unbiased inquiry take an objectivity approach and are likely to perceive reasoning as the primary source of knowledge and their academic peers as their principal community. Individuals who believe that knowledge is constructed through experience take a solidarity approach to knowledge development and are likely to value multiple ways of knowing and sources of knowledge (including
Colbeck & Wharton-Michael (2006) suggest that faculty members with the solidarity approach are more likely to participate in service-oriented activities. Epistemology is advanced as a personal factor that may make a difference when trying to explain faculty engagement.

Another important consideration is the influence of previous experience on faculty decisions about the nature of their work. Colbeck & Wharton-Michael (2006) use research by Bandura (1977), Boyte (2004) and Donahue (2000) to support the inclusion of previous experience as a factor in their conceptual model for explaining faculty participation in public scholarship. Colbeck & Wharton-Michael (2006) state that “previous experience inside and outside of academe are likely to shape faculty members’ beliefs about their capabilities to engage in public scholarship” (p. 21). Previous experience outside of the academy, specifically in community work or public service, is assessed in the FEM.

Finally, similar to values and belief systems, faculty motivation and how motivation impacts participation in engagement has also been studied. Both Holland (1999) and Jaeger & Thorton (2006) conclude that faculty involved in service see mostly intrinsic rewards; faculty who participate in engagement do so because they see themselves as having a responsibility to society. This view is reinforced by the work of O’Meara (2003) which finds that intrinsic motivation of faculty to perform service work often negates the lack of external motivation. While most of the research points toward
internal motivation and the lack of rewards or external motivation to participate in engagement, Checkoway (1998) found a correlation between faculty members’ engagement in service and their ability to publish and obtain external funding. One alternative hypothesis may be that some faculty are extrinsically motivated to participate in engagement because of potential professional rewards. Motivation seems to be an important factor to consider in the SFE. Here, faculty were presented with several questions to assess whether they derive professional motivation from intellectual pursuits/prestige or from more altruistic sources.

*Professional Factors*

We now turn to the other professional factors. One of the reoccurring themes in the literature is the role or influence of academic discipline in faculty participation. Antonio et al. (2000) find that the academic department is a stronger influence on faculty engagement than the institution. Several others (Ward, 2003, 2005; Zlotkowski, 2005) find that disciplinary norms, more so than institutional norms, are key for determining how faculty carry out their service work. Moreover, Ward (2003) states that there is an additional consideration here—the role of the disciplinary associations in encouraging and supporting faculty civic involvement and outreach.

As for discipline and findings revealed in the research, involvement in service often varies. Abes, Jackson & Jones (2002) found that faculty in the social sciences and health professions are more likely to engage in service-learning because they see service as relating to their departmental mission and material. Antonio et al. (2000) report that faculty working in the physical sciences and humanities were less likely to be engaged in
applied service activities, whereas faculty in education were more likely to be engaged. Here, faculty trained in education, social work and health education (service-oriented disciplines) were the most committed personally and professionally to service. The work of Voglegesang et al. (2005) supports these findings. The limited number of studies considering academic discipline often hypothesize that the difference between individual-centered departments (i.e., humanities and physical and biological sciences), and community-centered departments (i.e., education, health professions, social sciences and social work) explain the varying patterns in faculty participation.

Yet, discipline does not explain the entire picture. Antonio et al.’s. (2000) study revealed that much of faculty commitment to service can be explained by their personal values and a humanistic orientation rather than by field. Voglegesang et al. (2005) also note the importance of values when discerning faculty engagement through the disciplinary lens. Looking at beliefs, different patterns emerged, suggesting that faculty in nontraditional service fields often place a high value on service even if they do not demonstrate (or have an opportunity to demonstrate) service-oriented behaviors. For example, faculty in biology and the physical sciences are among the most likely to believe it is important or essential to be involved in programs to clean up the environment (Voglegesang et al., 2005). Faculty in the social sciences and the humanities are among the most likely to believe it is very important or essential to be actively involved in solving the problems of society (Voglegesang et al., 2005). Overall, it appears that faculty in education, health professions, social sciences and social work are the most likely to participate in service, but the research indicates that faculty in more individual-
centered disciplines do value service-oriented behaviors. This suggests a disjunction between beliefs and opportunities to participate in engagement. In the FEM, academic discipline, discipline support, department support and professional community support are assessed.

The research on faculty academic rank and tenure status and participation in service is less consistent than race, gender, and discipline. Antonio et al. (2000) note important findings in this area. They conclude that commitment to service is highest in faculty members with less status. As stated in the institutional factors section, they also found that commitment tends to be weaker among faculty at more selective/prestigious universities. This means that a commitment to service drops in value as professional and institutional prestige rises. Research by O’Meara (2002) supports this finding as it relates to service scholarship. While Baez’s 2000’s work also demonstrated that non-tenured or junior faculty are more likely to participate in service, contradictory work exists. Research by Abes et al. (2002) reveals that if a faculty member is not currently involved in service learning, junior faculty and non-tenured faculty are the least likely to begin participation. Jaeger & Thorton (2006) support this finding.

There are two main schools of thought about whether senior or junior faculty are the most likely to participate in engagement. Some researchers assert that if faculty members do not initiate engagement participation early it will not become a pattern of behavior. Others argue that the faculty members who personally value service focus on it after receiving tenure, when the pressures of the tenure process are alleviated and faculty
have an opportunity to focus on work that is personally important for career fulfillment (Holland, 1999, Jaeger & Thorton, 2006).

One factor that is less explored in the literature is graduate and other socialization. Tierney & Bensimon (1996) assert that faculty socialization begins in graduate school and is strongly reinforced in the department, noting that structures and processes within the departments provide faculty with key concepts of acceptable practices and the extrinsic rewards. It is hypothesized that when the highest levels of engagement are achieved, faculty seem to be socialized in graduate school to see service as part of their identity as scholars (O’Meara, 2002). On the other hand, faculty who develop a status orientation are the most likely to be socialized to be experts in their field, learning that traditional scholarship leads to status gains (Holland, 1999). Presocialization, or anticipatory socialization, for faculty roles in graduate school is particularly important in certain fields. Faculty socialized in service-oriented fields like social work and education appear to incorporate a commitment to service even when their personal values and orientations are held constant to account for possible effects (Antonio et al., 2000). In terms of the impact of socialization and faculty engagement, a recent survey of chief academic officers revealed that two thirds of respondents believed that graduate school training and socialization toward traditional forms of scholarship served as a barrier toward encouraging public scholarship (O’Meara, 2005). Certainly, peers, committees, department chairs and other socializing forces, both anticipatory (during graduate school) and early on in the faculty role, impact service participation.
Conceptual Model and Literature Synthesis

In an attempt to sum up the outcomes of the literature review on institutional, personal and professional dimensions that impact faculty participation in engagement, a conceptual model of faculty engagement has been developed. This model illustrates the factors that are hypothesized to influence faculty participation in engagement and demonstrate the complexity of understanding and explaining faculty engagement behavior. The Faculty Engagement Model (FEM) is presented in Illustration 2.1. Given the limits of the literature, this model is a beginning attempt to bring the research on the various dimensions of faculty engagement (institutional, personal, professional) together.
Illustration 2.1: Faculty Engagement Model

Most of the variables presented in the model should be recalled from the literature review. These variables are hypothesized to be important based on the writer’s synthesis and interpretation of the literature explaining engagement. The FEM demonstrates the complexity of understanding and representing the elements that help explain faculty engagement. Faculty engagement is the center or heart of the model and is connected to, and encompassed by the personal, professional and institutional
dimensions. The arrows in the model attempt to capture the various interactions among the variables within the dimensions noted in the literature review and hypothesized for this study. For example, gender and race/ethnicity may impact factors in the professional dimension, such as academic discipline. On the other hand, it is possible that a factor in the professional dimension, such as graduate education socialization, may impact a personal dimension factor, such as epistemology or values. For this reason, bidirectional arrows are used to demonstrate the intricacy of the dimensions in the FEM.

The model presents all of the variables discussed in the literature review while naming a few additional variables. One variable not discussed in the engagement literature but often noted in other faculty behavior studies is age/length of time in academe. Because age/length of time is speculated to influence faculty decisions about how to allocate time (Finkelstein et al., 1998), length of time in academe has been added to the model for further exploration. The autoethnographies in Gonzalez & Padilla (2008) were all stories of faculty who were among the first in their families to go to college. It plausible that individuals who are first generation college and make it all the way through to a doctorate and into a faculty position place a different emphasis on addressing social injustices and serving the public than other faculty. This factor, family college attainment status, has also been added to the model to test.

Research Limitations

In the institutional factors section of this chapter, the Holland Matrix and Kellogg Commission’s Seven Part Test were two of the primary conceptual models for the institutional factors investigated. These studies advance the key variables of faculty
involvement; community involvement; mission and priorities; infrastructure to support engagement; institutional policy such as the promotion and tenure process; institutional type; leadership; and, budget allocation. Prestige is also advanced in studies related to institutional factors influencing engagement (Antonio, 2002; Diverse Democracy, 2003; Hurtado et al., 2003; Voglegesang et al., 2005) While these variables are relevant based on the literature review, there are notable limits to the literature.

- The Holland Matrix was designed to be more applicable to liberal arts and master’s institutions. This troubles the conceptual framework. This institutional focus may be offset by the outcomes of The Kellogg Commission Report, focused exclusively on land-grant and state public institutions. Yet, The Kellogg Commission work, while expert-based, lacked empirical testing.

- The Diverse Democracy Project and the study by Hurtado et al. (2003), both secondary contributors to the literature that informs the institutional variables, use the same data set and do not discuss methodological limitations. Both projects were presented at national conferences, but remain unpublished in a referred journal. The same publication status holds true for the Voglegesang et al.’s (2005) work.

The literature informing the personal dimensions related to faculty engagement included articles that looked at faculty involvement in community service (e.g., Antonio et al., 2000; Baez, 2000; Holland, 1999; O’Meara, 2002), engaged scholarship (e.g., Antonio, 2002; Colbeck & Wharton-Michael, 2006; Voglegesang et al., 2005), and
service-learning (e.g., Holland, 1997; Ward, 1998). The variables advanced in these studies are gender, race, values/belief system, epistemology and previous experience. Again, several limitations exist in this literature.

- Many of the major studies considering personal dimensions are derived from studies which use the same data set. This data set is limited in terms of its ability to accurately measure engagement. For example, Voglegesang et al. (2005) note that the HERI survey does not specify what activities count as engaged scholarship, contending that the field would benefit “if the measures of engaged scholarship could be broadened to include a wider array of behaviors” and if survey results were “complimented with work that examines the contexts through which faculty are engaged and a more in depth look at the various measures of institutional support for these outcomes” (p. 23).

- The current body of research lacks adequate attention to the multitude of other personal characteristics that could influence faculty engagement. Where do out of work, marital and family status, sexual orientation, age, etc. fall within the current conceptual model? Are there important variables yet to be investigated? Could the investigation of additional personal characteristics provide explanatory power for faculty engagement?

Finally, the faculty professional dimension of the conceptual model needs to be examined. This dimension seems to demonstrate fairly consistent variables of interest throughout the current body of literature. While there is some debate as to whether tenured or junior faculty are more likely to participate in engagement, the literature is
resolute in the notion that discipline and socialization processes are the professional differences that make a difference. Nonetheless, limitations exist.

- There is a tendency in the studies to form a dichotomy among service-oriented disciplines and others. The criteria used to construct ‘service-oriented discipline’ was not clearly explained by the authors who chose to create this dichotomy.

- Again, as mentioned in the personal characteristics section, one of the primary limits within the professional construct is that all the major studies considering discipline, rank, and other factors are derived from studies which use the same data set. Thus, an assumption relevant here is that the HERI data is reliable and valid.

The literature synthesis and limitations presented are critical because they shape several assumptions of the model. Perhaps the most pronounced assumption of the FEM is that the variables impacting faculty engagement fall neatly within the three primary domains depicted. Another overarching FEM assumption is that given the limited body of research available addressing a comprehensive investigation of faculty engagement, literature on service-learning, public service and engaged scholarship pertain to a broader view of faculty engagement. That is to say, the results from these bodies of literature are not exclusive to their particular mechanism of delivery.
Overall, the FEM is presented to provide a conceptual model for the development of a new instrument to examine faculty engagement. Because it is among the first faculty engagement conceptual models, no doubt there is much room for refinement and redevelopment. The results of the SFE will help assess the utility of the model.
CHAPTER 3
METHODOLOGY

The intent of this chapter is to outline the research and data analysis techniques. It delineates the research design, research design issues, data analysis methods and ethical standards.

Research Design

The purpose of this study was to build upon the current body of literature attempting to explain faculty participation in engagement. To accomplish this purpose it was necessary to: 1) develop a working definition of engagement 2) construct a conceptual model of the factors impacting faculty participation in engagement 3) develop a pilot instrument that assessed faculty participation and motivators or deterrents, and 4) use the results of the instrument to further test and refine the model. This study addressed the following questions:

Research Question 1: How do faculty participate in engagement-related activity, and how often?

Research Question 2: When considering community-based research, service-learning, and, some forms of public and professional service activities as ‘the’ package for engaged faculty work, what variables help explain behavior? Are there patterns related to:
(a) Gender?
(b) Race/Ethnicity?
(c) Faculty Status/Rank?
Research Question 3: How do faculty perceive and experience engagement?

a) To what extent do faculty feel engagement is supported by their discipline? By their professional organizations? By their current department? By their institution?

b) What conditions would motivate faculty to expand engagement involvement? What conditions deter?

Research Question 4: How useful is the conceptual model developed for this study in explaining engagement?

(a) Do the main dimensions of the model, or the constructs of personal, professional and institutional factors, hold when subjected to a factor analysis test?

(b) Do the conceptual model and survey derived from it identify meaningful variables?

(c) Does the survey instrument confirm dynamics hypothesized in the development of the model or are there inconsistencies in the model based on the results of the survey?

Methodology

Given the research questions and theoretical framework, mostly quantitative methods were employed for this study. The Survey of Faculty Engagement (SFE) served as the data gathering approach. The SFE was a methodological tool developed specifically for the study. The survey asked specific questions related to faculty engagement activities and time allocated toward those activities; it assessed whether faculty members collaborated with the local community in research or teaching, taught a service-learning course and engaged in public service or professional service with a public benefit outcome. The SFE also asked questions related to institutional (environmental) factors that motivate and deter faculty members from participating in engagement. Bivariate and multivariate data analysis methodologies were used. These
approaches made it possible to answer specific and precise questions of considerable complexity. The specific approaches included correlations, t-tests, ANOVAs, regression analyses and exploratory factor analysis. The choice to use quantitative approaches was influenced by time, resources and the researcher’s own philosophical assumptions. Quantitative methodology assumes there are facts or causes of phenomena that can be reported numerically and prioritizes generalizability over depth in analysis. However, while the analysis was mostly quantitative in nature, the researcher did include an open-ended response question in the survey so that participants could share their views. These responses were used to help the researcher make meaning from the quantitative analyses.

*Instrument Design*

The research design started with survey development. Because this was the first comprehensive approach to understanding faculty participation in engagement, a special interest survey, The Survey of Faculty Engagement (SFE), was designed to serve as the data collection method.

*Item Generation.* Instrument development began with item generation. The initial questionnaire consisted of 37 items derived from the FEM model, which fell into three survey subsections: engagement behavior questions; questions related to personal and professional interests as well as questions related to perspectives on institutional support for engagement; and, demographic and background questions. In the first section, descriptions/definitions of engagement activities (action-based research\(^3\), service learning, public and professional service) were presented. Subsequent to the concrete

\(^3\) The term action-research was included in the first version of the survey but was changed to community-based research based on feedback from the expert panel review.
definitions of engagement activities, an item asking respondents to indicate whether or not (yes/no/don’t know) they participate in the behavior was presented, followed by an item asking faculty to indicate the average number of hours of participation per week during the academic term of survey distribution. The survey also asked respondents to indicate whether or not they expected hours of participation in action-based research, service learning, and public and professional service to increase, remain the same or decrease in the next year.

The second section of the survey attempted to capture important information on personal and professional interests/factors expected to impact faculty participation in engagement. Items in this section included questions related to professional motivation, personal values, professional association participation, academic discipline support for engagement, current department support for engagement, professional community support for engagement, graduate school socialization toward engagement, current university support for engagement and environment factors hypothesized to impact faculty willingness to participate in engagement activities. Most of these items were presented with a four point likert-scale with no neutral response option.

The final section of the survey aimed to gather important demographic information on the factors postulated to impact faculty engagement participation. Questions included items related to gender, race, family college attainment status, age, length of time in academe, current academic appointment location, and other demographic and background information.
Pre-Survey Evaluation. The next step in survey development was a pre-survey evaluation of the SFE. The purpose of conducting a critical systematic review was to identify and correct any foreseeable problems prior to executing the pilot survey (Fowler, 2002). A panel of field experts, i.e., a review team that was aware of contemporary interpretations of engagement as well as the nuances therein, was targeted for the expert review. Two individuals with methodological expertise also participated in the panel. The panel participants included the dissertation committee chair, a dissertation committee member with methodological expertise, a dissertation committee member with outreach and extension expertise, a faculty member at the study site with methodological expertise, two nationally recognized service-learning experts, and an expert on engagement and faculty life.

The panel members were provided with an introductory letter explaining the purpose of the research, a copy of the study’s conceptual model, a copy of the survey instrument and a survey appraisal document developed by the researcher intended to evaluate the content, clarity and ease of use of the instrument. The letter and the survey appraisal document are presented in Appendix A. The survey appraisal questionnaire was expected to serve as a step toward ensuring that all respondents understood questions in the same way and to evaluate potential weaknesses of the survey. The survey appraisal questionnaire consisted of a list of issues to look for in a set of questions, an activity where the experts paired survey questions with the underlying concept as well as the conceptual model informing the study. After generating feedback and reconciling suggestions, the survey instrument was considered complete and submitted for IRB
exemption review. The IRB exemption was granted in December, 2007, project number 2007E0834. The final survey instrument is presented in Appendix B. Based on the panel of experts review, the major adjustments to the final survey were revisions to definitions of engagement behaviors to improve clarity among survey participants. In one instance an engagement behavior was actually redefined and renamed. Community-based research replaced action-research in the final version of the survey. Also, a reorganization of the survey into four subsections occurred based on expert review and the uncovering of new literature which emphasized the importance of epistemology in explaining faculty engagement participation. The final four subsections of the survey were: engagement participation questions; epistemology/views on scholarship; personal interests and professional/ institutional factors; and, demographics. The survey also included an open-ended response section. The final instrument included 44 items.

Subject Population and Sampling Method

The sample for the pilot study was drawn from a large Midwestern land-grant university. While the proposed sampling frame limits the generalizability of the study, it was selected based on the nature of the survey (pilot) and accessibility of the population.

Institutional Context and Population Description. The academic make-up of the university selected for the pilot study was investigated. At the study site, there are over 170 undergraduate majors and 17 colleges and schools. Table 3.1 presents the demographic data for faculty at the study site. In 2007, there were 3,050 regular faculty at the university.
<table>
<thead>
<tr>
<th></th>
<th>Race/Ethnicity</th>
<th>Gender</th>
<th>Professor</th>
<th>Associate Professor</th>
<th>Assistant Professor</th>
<th>Professor</th>
<th>Instructor</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>972</td>
<td>672</td>
<td>461</td>
<td>9</td>
<td>2,114</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
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<td>55.5%</td>
<td>56.3%</td>
<td>69.3%</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Male</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>N</td>
<td>18.5%</td>
<td>33.6%</td>
<td>44.5%</td>
<td>43.8%</td>
<td>30.7%</td>
<td></td>
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</tr>
<tr>
<td>Asian</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>32%</td>
<td>42%</td>
<td>45%</td>
<td>4%</td>
<td>11%</td>
<td></td>
<td></td>
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<tr>
<td>Hispanic</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>10.6%</td>
<td>82%</td>
<td>126%</td>
<td>0.5%</td>
<td>21%</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Asian</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>N</td>
<td>2.7%</td>
<td>4.2%</td>
<td>5.4%</td>
<td>0%</td>
<td>3.9%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>N</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>N</td>
<td>83.2%</td>
<td>82%</td>
<td>126%</td>
<td>0.2%</td>
<td>21%</td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>African American</td>
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<td>8.1%</td>
<td>82%</td>
<td>126%</td>
<td>0.5%</td>
<td>21%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3.1: Pilot Study Site Faculty Demographic Data
**Sampling Method.** A stratified random selection method, stratifying along the dimension of academic cluster, served as the sampling method. A stratified random sample design was selected to reduce the normal sample variation and to produce a sample that was more likely to look like the total population than a simple random sample (Fowler, 2002). The stratified method enabled the researcher to create variation in the rates of selection among population subgroups, helping to ensure that respondent populations were about equal to their presence in the real environment (Scheaffer, Mendenhall & Ott, 2006). The subgroup of academic area was identified as the most logical given the importance of academic discipline in previous engagement literature.

Once the sampling method was determined, the institution’s report on the outcomes of the Higher Education Research Institute’s (HERI) 2004-2005 survey was used to develop the academic clusters for sample stratification. Academic clusters were identified by considering faculty responses to the engagement-oriented items in the HERI survey and cross-analyzing those responses by college of appointment. This was achieved by performing a hierarchical cluster analysis. From this analysis, seven clusters were identified. The academic clusters developed for the survey are listed in Table 3.2.
<table>
<thead>
<tr>
<th>Cluster Number</th>
<th>College or School</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>Art, including Music (ART), Medicine (MED) and Allied Medicine, including Nursing (AMP)</td>
</tr>
<tr>
<td>Two</td>
<td>Business (BUS), Pharmacy (PHR) Biological Sciences (BIO) and Engineering, including Architecture (ENG)</td>
</tr>
<tr>
<td>Three</td>
<td>Dentistry (DEN) and Veterinary Medicine (VET)</td>
</tr>
<tr>
<td>Four</td>
<td>Education and Human Ecology (EHE) and Food, Agriculture and Environmental Sciences (FAES)</td>
</tr>
<tr>
<td>Five</td>
<td>Humanities (HUM), Math and Physical Sciences (MPS) and Social and Behavioral Sciences (SBS)</td>
</tr>
<tr>
<td>Six</td>
<td>Law (LAW)</td>
</tr>
<tr>
<td>Seven</td>
<td>Social Work (SWK)</td>
</tr>
</tbody>
</table>

Table 3.2: Academic Clusters Identified for the Stratified Random Sample

After these clusters were identified, a second cluster analysis, a k-means analysis was conducted to confirm the academic clusters identified by the hierarchical cluster analysis. When identifying seven clusters for the k-means analysis, the k-means analysis confirmed the results of the hierarchical cluster analysis.

Sample Size

The university’s Office of Institutional Research and Planning (OIRP) agreed to assist in the development of the sample. The goals identified during sample size planning were to derive a sample that was: 1) representative of the university as a whole on the elements of interest; 2) large enough to perform meaningful regression analyses; 2) small
enough to keep data collection manageable and reasonable; and 4) small enough to be sensitive to other faculty surveys and institutional research scheduled. Based on these goals, the OIRP recommended a sample size of 1,072 regular full-time tenure track faculty from the university’s main campus. This sample size was determined to: 1) allow for a full sample that follows the distribution of academic cluster; 2) be large enough to do the desired analyses; and, 3) generate the desired number of responses given prior experience with response rates from faculty at the institution. Table 3.3 shows the academic cluster breakdown of the first round of sampling, which assumed a maximum response rate of 33%, as well as the actual responses achieved.

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Number Contacted</th>
<th>Desired Respondents</th>
<th>Actual Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART/AMP/MED</td>
<td>315</td>
<td>105</td>
<td>123</td>
</tr>
<tr>
<td>BUS/PHR/ENG/BIO</td>
<td>210</td>
<td>70</td>
<td>68</td>
</tr>
<tr>
<td>DEN/VET</td>
<td>54</td>
<td>18</td>
<td>27</td>
</tr>
<tr>
<td>EHE/FAES</td>
<td>105</td>
<td>35</td>
<td>52</td>
</tr>
<tr>
<td>HUM/MPS/SBS</td>
<td>366</td>
<td>122</td>
<td>135</td>
</tr>
<tr>
<td>LAW</td>
<td>20</td>
<td>13</td>
<td>19</td>
</tr>
<tr>
<td>SWK</td>
<td>18</td>
<td>9</td>
<td>15</td>
</tr>
</tbody>
</table>

Table 3.3: Sample Numbers and Response

The research plan included a measure to resample clusters that fell significantly short of these thresholds. However, because only one cluster feel short of the desired
number of responses yet came within five percent of the threshold, no re-sampling was conducted.

Data Collection

The survey was administered through eListen, a web-based survey application and data storing program owned and operated by the university’s Office of Student Affairs Assessment. Members of the sample received an email explaining the project and were directed to the survey web link. A web-based survey was appropriate for this study for many reasons. The advantages of the online survey were: paper, postage, mail and data entry costs were eliminated; time required for implementation was reduced; the survey was available in real time; reminders and follow-up with nonrespondents was easy; and, data from the survey was easily imported into the data analysis program (SPSS) used to analyze survey results (Dillman, 2000). Moreover, eListen offered built-in features that made anonymity easy to maintain. The primary concern about web-based surveys is that online use is not universal and therefore web-based surveys introduce error (Dillman, 2000). This concern did not apply to the study at hand because university faculty typically demonstrate competency in terms of web, email and other forms of online communication use4. Given that the primary limitation of web-based surveys did not apply to the sample population, it was deemed the best data collection approach.

Follow-up with nonrespondents consisted of reminder emails. All sample nonrespondents were sent a first, second and final email reminder.

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4 Faculty at the pilot study institution, for example, demonstrated necessary competency. Course rosters, grade posting procedures, etc. are administered online. Faculty also fulfill student contact expectations via email.
Research Design Issues

This research project, like all research processes, was subject to threats to internal and external validity. The steps taken to promote validity and reliability are discussed below.

Internal Validity

Threats to internal validity included threats related to the attitude of subjects as well as the threats of instrument validity and statistical conclusion validity. The attitude of subjects threat occurs when the way subjects view their participation in a study affects their response (Fraenkel & Wallen, 2000). Because one major section of this study asks faculty to report their perceptions related to institutional/departmental support for engagement, events or activities taking place at the institution and within academic departments during the time of the survey could have impacted how respondents answered certain questions.

Instrumentation threats occur when a distortion in the instrument exists (Campbell & Russo, 1999). In this study, instrument validity involved the correspondence between the survey responses faculty provided and their true values and ways to improve that correspondence. The SFE included several objective or factual questions. Objective questions reach higher levels of validity when: the questions are understood; there is knowledge; and, when there are no issues with social desirability (Fowler, 2002). To promote instrument validity, the SFE provided definitions for ambiguous terms, allowed respondents to continue the survey when a question was left blank\(^5\) and remained neutral.

\(^5\) Only the questions related to participation in engagement activities were forced-choice.
with respect to values within the instrument (i.e., whether participation in engagement was desirable). The major threat to validity with subjective survey questions is the use of problematic scales. Validity with subjective questions may be improved by having more rather than fewer categories for respondents to choose from since people’s attitudes often range along a continuum (Krosnick & Fabrigar, 1997). In the SFE, a four point likert-item scale was used with subjective questions to provide a reasonable range of responses to suit respondent attitudes and beliefs.

Assessing the construct and content validity of the instrument was also important. Construct validity is the approximate truth of a conclusion that the operationalization (i.e., SFE) accurately reflects the study’s construct of faculty engagement (Trochim, 2001). Content validity is also particularly important for special interest surveys (Trochim, 2001). The panel of expert’s content-sensitive review of the instrument assisted with construct and content validity.

The final internal validity threat was statistical validity. Threats of statistical validity include issues with power and the violation of method assumptions (Gliem, 2005). These issues are addressed in the data analysis section (Chapter 4).

**External Validity**

External validity is the generalizability of the results of a study to all people, places or times (Dooley, 2001; Trochim, 2001). Within this broad definition, two types of threats are typically described, one type dealing with generalizability to all people (population) and one type dealing with generalizability to all places (ecological) (Gliem, 2005). Because this was a pilot study and intended to describe only the population
accessible to the researcher, it did not attempt to generalize to all places and therefore threats to external validity were minimized.

Nonresponse was another primary population threat. Efforts were made to improve response rates through the development of targeted follow-up email with nonrespondents. While the sample size was derived in part by looking at historical data about the response rates of faculty at the institution, it was also important to explore the possibility that nonresponse would be significant enough to introduce error that would require the researcher to correct for nonresponse. As mentioned, a second round of sampling was planned in the event that nonresponse prevented the researcher from achieving the target number of respondents within each academic cluster. It is, however, important to note that those faculty who did respond to the survey may have been the most sympathetic to engagement efforts. This should be kept in mind when interpreting results.

Reliability

Reliability refers to the extent to which a test or a tool gives consistent results across a range of settings and researchers (Wellington, 2000, cited in Scaife, 2004). Reliability is the degree to which the questions and the survey instrument provide consistent measures in comparable situations (Fowler, 2002). In terms of creating good measures that prove reliable, several important considerations informed item design in the SFE. The main issues impacting reliability with question design included inadequate wording of items, poorly defined terms within survey items, multiple questions in one item and a lack of standardized expectations for response type. The researcher took these
issues into account during instrument development (Fowler, 2002). The researcher was also able to address many of these issues through the panel of experts survey review.

In order to evaluate the measurement reliability of the data collected from the instrument, Cronbach’s alpha test was applied to several survey subsections, many of which were summed to create index scores in the data analyses. Cronbach's alpha measures how well a set of items measure a single construct. It serves as a coefficient of reliability. After running the Cronbach’s alpha, determinations were made as to whether marginal reliability could be achieved by removing any individual instrument items from the data analyses. The researcher determined that a reliability coefficient of 0.60\(^6\) should serve as the threshold. The results of the tests are presented in Table 3.4.

\(^6\) Values of .60 to .70 are deemed the lower limit of acceptability. Since this is a pilot or first attempt survey, using the lower limit is appropriate (Hair et al., 1998).
<table>
<thead>
<tr>
<th>Construct</th>
<th>N</th>
<th>Number of Items</th>
<th>Reliability Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Motivation</td>
<td>426</td>
<td>7</td>
<td>.663</td>
</tr>
<tr>
<td>Personal Values</td>
<td>424</td>
<td>7</td>
<td>.736</td>
</tr>
<tr>
<td>Discipline Engagement Support</td>
<td>418</td>
<td>4</td>
<td>.874</td>
</tr>
<tr>
<td>Department Engagement Support</td>
<td>421</td>
<td>4</td>
<td>.872</td>
</tr>
<tr>
<td>Environmental Factors to Promote Engagement</td>
<td>397</td>
<td>8</td>
<td>.851</td>
</tr>
<tr>
<td>Professional Community Engagement Support</td>
<td>420</td>
<td>7</td>
<td>.851</td>
</tr>
<tr>
<td>Graduate Education Socialization</td>
<td>425</td>
<td>4</td>
<td>.913</td>
</tr>
<tr>
<td>Epistemology</td>
<td>432</td>
<td>2</td>
<td>.578</td>
</tr>
</tbody>
</table>

The scale designed to measure epistemology did not meet the reliability coefficient threshold. The researcher decided to retain an individual scale item related to traditional/scientific inquiry to assess the relationship between epistemology and engagement participation in lieu of an index score.

**Other Issues**

In addition to reliability and validity concerns, another major challenge to consider was how to deal with missing data. While missing data was inevitable, good research designs reduce the likelihood that missing data will effect the generalizability of results. Once the data was obtained, the researcher conducted an assessment of whether there was systematic association between the missing data and valid data. No significant
correlations existed among the variables and therefore no further steps were taken to address biases.

Data Analysis Methods

This section restates the research questions followed by specific data analysis plans.

Research Question 1
How do faculty participate in engagement-related activity, and how often?

Analysis
Frequencies of responses to questions about participation in each engagement activity from the first subsection of the SFE were tabulated. Percentages of faculty participating in each activity were derived. Descriptive statistics generated from these items provided information related to the average number of hours per week faculty participate in engagement activities and the prevalence of each engagement activity among the faculty.

Research Question 2
(a) When considering community-based research, service-learning, and, some forms of public and professional service activities as ‘the’ package for engaged faculty work, what variables help explain behavior? (b) Are there patterns related to: gender, race/ethnicity, faculty status/rank, and/or discipline?

Analysis
Regression techniques were used to address RQ2 (a). The selection of variables, or variable specification, was an important step in ensuring the objectives of the regression analysis were met (Hair et al., 1998; Schroeder et al., 1987). Faculty participation in ‘the’ package of engagement activities served as the dependent variable.
Because the intent of the analysis was to understand whether or not the same predictors exist for a broader view of faculty engagement activities as do for individual faculty engagement behaviors such as service-learning, the first step in deriving the dependent variable was to collapse the data in a way that represented the three primary domains that comprise the faculty role—teaching, research and service. The dependent variable was operationalized by first condensing the service-oriented activities of faculty (engagement-oriented professional service, outreach-oriented professional service and public service). After the service-oriented participation variable was created (faculty who participated in at least one activity were coded ‘1’ and faculty who did not participate in any activity were coded ‘0’), this variable was considered in conjunction with faculty responses to the questions related to participation in community-based research (represents research domain) and service-learning (represents teaching domain). Respondents who participated in two out of three of these activities were recoded ‘yes’ (where participation=1) for participation in ‘the’ package of engagement and those who participated in one or no activities were recoded as ‘no’ (where nonparticipation=0). The use of a dependent binary variable is not appropriate for traditional (linear) multiple regression methods because this type of data coding violates a major method assumption. Therefore, binary logistic regression was conducted. The independent variables for the regression analysis were based on the literature view and are presented in Table 3.5.
<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race/Ethnicity</td>
<td>White=0, Nonwhite=1</td>
</tr>
<tr>
<td>Gender</td>
<td>Male=0, Female=1</td>
</tr>
<tr>
<td>Discipline Engagement Level</td>
<td>Creation of a binary variable where Academic Clusters that averaged 6.5 or fewer hours of engagement =0 (below the sample mean for total hours) and 6.6 and above hours=1 (at or above the sample mean for total hours)</td>
</tr>
<tr>
<td>Professional Motivation</td>
<td>Summed Professional Motivation scale index score and creation of a binary variable where Status Orientation=0, Humanistic Orientation=1</td>
</tr>
<tr>
<td>Personal Values</td>
<td>Summed Personal Values scale index score and creation of a binary variable where Individualistic Orientation=0, Outward Orientation=1</td>
</tr>
<tr>
<td>Age</td>
<td>51 and above=3, 40-50=2, 39 and younger=1</td>
</tr>
<tr>
<td>Tenure Status</td>
<td>Nontenured but on Tenure Track=0, Tenured=1</td>
</tr>
<tr>
<td>Rank</td>
<td>Assistant Professor=0, Full Professor and Associate Professor=1</td>
</tr>
<tr>
<td>Graduate School Socialization</td>
<td>Summed Graduate School Socialization scale index score and creation of a binary variable where Not Socialized=1, Socialized=0</td>
</tr>
<tr>
<td>Discipline Support</td>
<td>Summed Discipline Support index score</td>
</tr>
<tr>
<td>Department Support</td>
<td>Summed Department Support index score</td>
</tr>
<tr>
<td>Professional Association Support</td>
<td>Summed Professional Association index score</td>
</tr>
<tr>
<td>Family College Attainment Status</td>
<td>Non-first Generation=0, First Generation=1</td>
</tr>
<tr>
<td>Institutional Supporta</td>
<td>Summed Institutional Support index score</td>
</tr>
<tr>
<td>Epistemology</td>
<td>Scale score</td>
</tr>
<tr>
<td>Length of Time in Academe</td>
<td>14 or more =3, 8-14=2, 7 or less=1</td>
</tr>
<tr>
<td>Previous Experience</td>
<td>No Previous Experience=0, Previous Public/Community Experience=1</td>
</tr>
</tbody>
</table>

Table 3.5 Continued
<table>
<thead>
<tr>
<th>Community Involvement Scale score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional Prestige Scale score</td>
</tr>
</tbody>
</table>

* Includes Mission and Priorities, Leadership Support, Budget, Infrastructure, Tenure and Promotion Procedures and Faculty Involvement.

Table 3.5 Independent Variables for the Binary Logistic Regression Equation for Research Question 2

The regression model for this question was:

\[
\text{logit} (p) = b_0 + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + b_5 X_5 + b_6 X_6 + b_7 X_7 + b_8 X_8 + b_9 X_9 + b_{10} X_{10} + b_{11} X_{11} + b_{12} X_{12} + b_{13} X_{13} + b_{14} X_{14} + b_{15} X_{15} + b_{16} X_{16} + b_{17} X_{17} + b_{18} X_{18} + b_{19} X_{19}
\]

For RQ2 (b), the researcher assessed the predictive ability of gender, race/ethnicity, tenure status, academic rank and academic discipline in the regression model as indicated by the binary logistic regression analysis and also conducted t-tests and analysis of variance (ANOVAs) to determine if there were significant differences between the means among faculty who participated in a greater number of engagement activities and those who did not.
Research Question 3

How do faculty perceive and experience engagement? (a) To what extent do faculty feel engagement is supported by their discipline? By their professional organizations? By their current department? By their institution? (b) What conditions would motivate faculty to expand engagement involvement? What conditions would deter?

Analysis

For research question 3(a), frequencies of responses to questions related to disciplinary, professional community and current department support were derived. Institutional support was assessed by examining the frequencies of responses to the series of items in the survey which asked faculty to report on current university support. For research question 3(b), frequencies were also run on the questions associated with environmental factors that might promote engagement to better understand institutional and professional-oriented motivators for increased engagement involvement.

Research Question 4

How useful is the conceptual model developed for this study in explaining engagement? (a) Do the main dimensions of the model, i.e., the constructs of personal, professional and institutional factors, hold when subjected to a factor analysis test? (b) Do the conceptual model and survey derived from it identify meaningful variables? (c) Does the survey instrument confirm dynamics hypothesized in the development of the model or are there inconsistencies based on the results of the survey?
Analysis

RQ4 (a) was answered by conducting a factor analysis. Factor analysis has two primary goals: 1) It enables the representation of relationships among variables in the observed data set parsimoniously and 2) It derives factors that are meaningful, factors that are simple and interpretable (Gliem, 2005). Factor analysis is a suitable method for analyzing complex and multidimensional relationships and so served as an appropriate way of assessing the utility of the personal, organizational and professional dimensions of the conceptual model.

Exploratory factor analysis (EFA) was advanced as the appropriate factor analysis method. The purpose of an EFA is to address the problem of analyzing the structure of the interrelationships (correlations) among a large number of variables by identifying the underlying dimensions (Hair et al., 1998). EFA has two primary purposes: it is used for data reduction or for identifying structure through data summarization (Hair et al., 1998). Here, the intent was the latter.

Three primary analysis decisions were made for the factor analysis: the design of the study in terms of the number of variables; the measurement properties of the variables and types of allowable responses; and, the sample size. Starting with the number of variables, Hair et al. (1998) suggest at least five variables should be included to represent each proposed factor. This recommendation was fulfilled. In terms of the sample and measurement properties of variables, while factorial analysis is intended to be used for metric variables, the nonmetric or dichotomous and categorical variables in this survey were still assessed. While in theory only metric variables are considered, in application,
especially in the social sciences, rarely is it possible or desirable to consider only metric variables (Thompson, 2004). Finally, sample size constraints for factorial analysis were taken into account when the sample was derived.

Once the data was collected and the factor analysis process began, several final steps relative to the execution of this analysis method were taken. First, the researcher verified that correlations were present in the data. Many researchers recommend several correlations above .30 (Hair et al., 1998). The Bartlett test of sphericity was also examined to ensure the appropriateness of the method.

Decisions were made for the extraction method and the number of factors selected to represent the underlying structure. Principal components analysis was used as the extraction method. In terms of the number of factors representing the underlying structure, the most common method used is the latent root criterion (Gliem, 2005; Hair et al., 1998; Thompson, 2004). When using the latent root method, factors retained or extracted must have eigenvalues greater than one (Gorsuch, 1983; Hair et al., 1998; Thompson, 2004). The scree plot and the residual correlation matrix were also examined prior to making final decisions about how many factors to retain.

Three steps were taken to select the final factor solution. First, the unrotated factor matrix was assessed, then the rotated factor matrix, and then the researcher assessed whether or not there was a need to respecify the model (Hair et al., 1998). The purpose of rotating the factor axes was so that the nature of the underlying constructs become more obvious (Thompson, 2004). The method of rotation used was oblique rotation. Oblique rotation seemed to be a better fit for the purpose of this study because in
the oblique rotation the theoretically underlying dimensions “are not assumed to be uncorrelated with each other” (Hair et al., 1998, p. 109). After the oblique rotation was preformed, several final assessments were made, including a determination of the placement of variables with several significant correlations as well as whether to ignore or evaluate for deletion variables with low communalities. Tabachnick & Fidell’s (1996) rule of thumb that loadings of .32 (absolute value) or above was used to identify variables that loaded on each factor. The final step in the factor analysis was labeling the factors.

RQ4 (b), or whether or not the survey derived meaningful variables, was answered by conducting a stepwise multiple regression. Stepwise multiple regression allowed variables to sequentially enter the model, with the greatest contributors added first, until there are no more variables to be entered which yielded additional explanatory power (Hair et al., 1998; Schroeder et al., 1987). This method was the best fit for the research question because it allowed the researcher to see how the variables ranked in terms of highest to lowest when it came to explanatory power while leaving out variables that were not statistically significant. The dependent variable was a summed index scale score for the number of engagement hours per week for the five engagement activities identified for the study and the independent variables and coding are presented in Table 3.6.
<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race/Ethnicity</td>
<td>White=1, Nonwhite=2</td>
</tr>
<tr>
<td>Gender</td>
<td>Male=1, Female=2</td>
</tr>
<tr>
<td>Discipline Engagement Level</td>
<td>Academic Clusters index score for Sum of Engagement Hours where 5 or fewer hours=1 (low level of engagement), 5.1 to 10 hours=2 (medium level of engagement) and 10.1 or more hours=3 (high level of engagement)</td>
</tr>
<tr>
<td>Professional Motivation</td>
<td>Summed Professional Motivation scale index score and creation of a binary variable where Status Orientation=2, Humanistic Orientation=1</td>
</tr>
<tr>
<td>Personal Values</td>
<td>Summed Personal Values scale index score and creation of a binary variable where Individualistic Orientation=2, Outward Orientation=1</td>
</tr>
<tr>
<td>Age</td>
<td>51 and above=3, 40-50=2, 39 and younger=1</td>
</tr>
<tr>
<td>Tenure Status</td>
<td>Nontenured but on Tenure Track=2, Tenured=1</td>
</tr>
<tr>
<td>Rank</td>
<td>Full Professor=1, Associate Professor=2, Assistant Professor=3</td>
</tr>
<tr>
<td>Graduate School Socialization</td>
<td>Summed Graduate School Socialization scale index score and creation of a binary variable where Not Socialized=2, Socialized=1</td>
</tr>
<tr>
<td>Discipline Support</td>
<td>Summed Discipline Support index score</td>
</tr>
<tr>
<td>Department Support</td>
<td>Summed Department Support index score</td>
</tr>
<tr>
<td>Professional Association Support</td>
<td>Summed Professional Association index score</td>
</tr>
<tr>
<td>Family College Attainment Status</td>
<td>Non-first Generation=2, First Generation=1</td>
</tr>
<tr>
<td>Institutional Support</td>
<td>Summed Institutional Support index score</td>
</tr>
<tr>
<td>Epistemology</td>
<td>Scale score</td>
</tr>
<tr>
<td>Length of Time in Academe</td>
<td>14 or more =3, 8-14=2, 7 or less=1</td>
</tr>
</tbody>
</table>

Table 3.6 Continued
The model for this question was:

\[ \hat{Y} = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_7X_7 + b_8X_8 + b_9X_9 + b_{10}X_{10} + b_{11}X_{11} + b_{12}X_{12} + b_{13}X_{13} + b_{14}X_{14} + b_{15}X_{15} + b_{16}X_{16} + b_{17}X_{17} + b_{18}X_{18} + b_{19}X_{19} \]

The variables retained in the stepwise model were the variables deemed to provide explanatory power. RQ4 (c) was then answered by comparing the outcomes of the regression model with the primary conclusions of the literature review.

**Ethical Standards**

The final point of interest in this chapter is how the research met ethical standards. In keeping with the standards of ethical research, participation in the research project was completely voluntary. The survey was sent as an email link and faculty had the choice to open the link, respond to the questions, and submit their responses.
Respondents also had the option to discontinue the survey at any point. An email account for the study was provided so participants could access the researcher and request that their information not be included in the study at any point during the data collection phase.

In this study, anonymity of each individual participant was promised. Once the survey sample was derived, the email address list for the faculty included in the survey was developed by the Office of Human Resources and that data was provided to the Office of Student Affairs Assessment, which proceeded to ensure those addresses were encrypted and uploaded to a private and protected server. Email addresses were inaccessible to the Principal Investigator and Co-PI. Data was analyzed and reported collectively and therefore posed no risks.
The intent of this chapter is to summarize the outcomes of the data analyses conducted for the study. The results of univariate and advanced statistical analyses are detailed for each research question based on the research design presented in Chapter 3.

**Demographic Data**

As indicated in Chapter 3, the sample size for the study was 1,072 regular full-time tenure track faculty from the university’s main campus. The study yielded 436 responses, a 40.7% response rate. The demographic data presented in Table 4.1 includes gender, ethnicity, and rank data for survey respondents compared to the university as a whole.
<table>
<thead>
<tr>
<th></th>
<th>Survey Respondents</th>
<th>University Population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>137</td>
<td>31.4</td>
</tr>
<tr>
<td>Male</td>
<td>291</td>
<td>66.7</td>
</tr>
<tr>
<td>Unreported</td>
<td>8</td>
<td>1.8</td>
</tr>
<tr>
<td><strong>Race/Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>15</td>
<td>3.4</td>
</tr>
<tr>
<td>White/Caucasian</td>
<td>327</td>
<td>75.0</td>
</tr>
<tr>
<td>Asian American</td>
<td>42</td>
<td>9.6</td>
</tr>
<tr>
<td>Hispanic</td>
<td>12</td>
<td>2.7</td>
</tr>
<tr>
<td>International</td>
<td>13</td>
<td>3.0</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
<td>2.1</td>
</tr>
<tr>
<td>Unreported</td>
<td>17</td>
<td>3.9</td>
</tr>
<tr>
<td><strong>Rank</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full Professor</td>
<td>162</td>
<td>37.2</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>133</td>
<td>30.5</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>127</td>
<td>29.1</td>
</tr>
<tr>
<td>Unreported</td>
<td>14</td>
<td>3.2</td>
</tr>
</tbody>
</table>

Table 4.1: Demographics of Sample Respondents and Pilot Study Population
Research Question 1

The first research question concerned the ways faculty participated in engagement activity and the frequency of participation. Illustration 4.1 presents the frequencies of responses to each of the engagement participation questions for community-based research, service-learning, outreach-oriented professional service, engagement-oriented professional service and public service. Overall, 76.8% (n=335) of the faculty in the study reported participating in at least one engagement activity. Faculty reported the highest level of participation in outreach-oriented professional service (n=216, 49.5%), followed closely by participation in engagement-oriented professional service (n=205, 47.0%) and public service (n=197, 45.2%). Faculty reported lower rates of participation for community-based research (n=141, 32.3%) and service-learning (n=86, 19.7%).
Illustration 4.1: Faculty Participation in Engagement Activities (n=436)

The number of hours per week during the present academic term faculty participated in engagement activities was also examined. For all engagement activities, there was considerable variation in the amount of time spent on any given activity per week (see Table 4.2). While some respondents reported less than one hour of participation per week within any named engagement activity category, the upper values for average hours of participation ranged from twenty-five hours in public service to fifty-two hours in outreach-oriented professional service. Boxplots were examined in
order to better understand these results and it was clear that the values at the upper limits of the range were outliers. Overall, the activity with the highest average value for hours of participation per week was community-based research (mean of 6.24 hours, SD of 7.145) and the lowest average hours of participation was spent on public service activities (mean of 2.26 hours, SD of 6.326). However, given the presence of outliers and the large standard deviation values, it may be more appropriate to consider the median value for these engagement activities (Berman, 2001). Here, we see that community-based research continued to be the activity where the largest number of hours was spent per week (median of 4.0 hours) and the rest of the activities were consistent with a median of 2.0 hours of participation weekly. When summing the total hours of engagement participation reported across the five activities, faculty at the site of the pilot study averaged 6.6 hours of engagement work per week.

<table>
<thead>
<tr>
<th>Activity</th>
<th>M</th>
<th>Mdn</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community-Based Research</td>
<td>6.244</td>
<td>4.00</td>
<td>7.145</td>
<td>0.50</td>
<td>50.00</td>
</tr>
<tr>
<td>Service-Learning</td>
<td>5.369</td>
<td>2.00</td>
<td>9.176</td>
<td>0.10</td>
<td>45.00</td>
</tr>
<tr>
<td>Outreach-Oriented Professional Service</td>
<td>3.864</td>
<td>2.00</td>
<td>5.609</td>
<td>0.20</td>
<td>52.00</td>
</tr>
<tr>
<td>Engagement-Oriented Professional Service</td>
<td>3.640</td>
<td>2.00</td>
<td>4.852</td>
<td>0.10</td>
<td>40.00</td>
</tr>
<tr>
<td>Public Service</td>
<td>2.261</td>
<td>2.00</td>
<td>6.326</td>
<td>0.20</td>
<td>25.00</td>
</tr>
</tbody>
</table>

Table 4.2: Means, Median, SD, Min and Max for Hours of Participation

**Research Question 2**

The second research question of the study concentrated on examining faculty who participated in ‘the’ package of engaged faculty work. For this research question, a binary
logistic regression was conducted. To conduct this analysis, the dependent variable of participation in ‘the’ package of engaged faculty work was developed by creating an engagement-oriented category for teaching (service-learning), research (community-based research) and service (outreach or engagement-oriented professional service or public service) and summing counts of participation in each of these categories in order to derive an index score. Faculty who integrated engagement into at least two of the three primary faculty responsibility areas (index score of two or higher) were coded as ‘1’ and those who participated in engagement in one or fewer of the areas (index score one or zero) were coded as ‘0’. The null hypothesis was that none of the independent variables had predictive power for faculty participation in ‘the’ package of engagement activity. Table 4.3 summarizes the results of the initial test for the model in which the coefficients for all of the independent variables were zero. Because the finding of significance was <.05, the null model for the regression was rejected.

<table>
<thead>
<tr>
<th>Step 0 Constant</th>
<th>B</th>
<th>SE</th>
<th>Wald</th>
<th>df</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-.292</td>
<td>.128</td>
<td>5.189</td>
<td>1</td>
<td>.023</td>
</tr>
</tbody>
</table>

Table 4.3: Binary Logistic Regression Analysis Summary for Independent Variables Predicting Engagement Participation (n=248)

The goodness of fit test was considered for the model including the independent variables using the Hosmer and Lemeshow Goodness-of-Fit test. The p-value = 0.732. Because it was >.05, the researcher failed to reject the null hypothesis that there is no
difference between the observed and predicted values of the dependent variable, implying that the model's estimates fit the data at an acceptable level. The Wald statistic and the corresponding significance level for each of the independent variables are presented in Table 4.4. Here, statistically significant associations were found between the logit of participation in ‘the’ package of engagement activity (as defined by engagement integration in at least two of the three primary domains of faculty responsibilities) and discipline engagement level, department support, professional community support and epistemology. Hence, participation in ‘the’ package of engagement activity increased with discipline engagement level and professional community support whereas the probability of participation in the ‘the’ package of engagement activity decreased with department support and epistemology. Holding all other variables constant, the odds of participating in ‘the’ package of engagement activity increased by a factor of over 2 if the faculty member belonged to an academic cluster identified as conducting more engagement hours than the sample mean (i.e., variable labeled discipline engagement level). The odds of participating in ‘the’ package of engagement activity also increased by a factor of over 1 for each unit of increase in professional community support. Conversely, holding all other variables constant, the odds of participating in ‘the’ package of engagement activity decreased by a factor of .53 for each unit of agreement with a traditional, scientific epistemology. Furthermore, we can see that we would expect the odds of participating in ‘the’ package of engagement activity to decrease by a factor of .83 with each reported decrease in department support by survey responders. It is also important to note that while not statistically significant, the odds of a faculty member
participating in ‘the’ package of engagement activity increased by a factor of 4.5 with
tenure status.

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>Wald</th>
<th>Df</th>
<th>Sig.</th>
<th>Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-2.572</td>
<td>1.552</td>
<td>2.746</td>
<td>1</td>
<td>.097</td>
<td>.076</td>
</tr>
<tr>
<td>Discipline Engagement Level</td>
<td>.736</td>
<td>.330</td>
<td>4.987</td>
<td>1</td>
<td>.026*</td>
<td>2.088</td>
</tr>
<tr>
<td>Professional Motivation</td>
<td>-.545</td>
<td>.369</td>
<td>2.191</td>
<td>1</td>
<td>.139</td>
<td>.580</td>
</tr>
<tr>
<td>Personal Values</td>
<td>.521</td>
<td>.379</td>
<td>1.887</td>
<td>1</td>
<td>.170</td>
<td>1.683</td>
</tr>
<tr>
<td>Discipline Support</td>
<td>.082</td>
<td>.089</td>
<td>.844</td>
<td>1</td>
<td>.358</td>
<td>1.086</td>
</tr>
<tr>
<td>Department Support</td>
<td>-.182</td>
<td>.078</td>
<td>5.400</td>
<td>1</td>
<td>.020*</td>
<td>.834</td>
</tr>
<tr>
<td>Professional Community Support</td>
<td>.257</td>
<td>.090</td>
<td>8.119</td>
<td>1</td>
<td>.004**</td>
<td>1.293</td>
</tr>
<tr>
<td>University Support</td>
<td>-.005</td>
<td>.051</td>
<td>.011</td>
<td>1</td>
<td>.915</td>
<td>.995</td>
</tr>
<tr>
<td>Community Involvement</td>
<td>.383</td>
<td>.235</td>
<td>2.652</td>
<td>1</td>
<td>.103</td>
<td>1.466</td>
</tr>
<tr>
<td>Institutional Drive for Prestige</td>
<td>-.031</td>
<td>.244</td>
<td>.016</td>
<td>1</td>
<td>.899</td>
<td>.969</td>
</tr>
<tr>
<td>Graduate School Socialization</td>
<td>.377</td>
<td>.320</td>
<td>1.389</td>
<td>1</td>
<td>.239</td>
<td>1.458</td>
</tr>
<tr>
<td>Gender</td>
<td>-.202</td>
<td>.353</td>
<td>.327</td>
<td>1</td>
<td>.568</td>
<td>.817</td>
</tr>
<tr>
<td>Race</td>
<td>.123</td>
<td>.375</td>
<td>.108</td>
<td>1</td>
<td>.742</td>
<td>1.131</td>
</tr>
<tr>
<td>Family College Attainment</td>
<td>-.030</td>
<td>.346</td>
<td>.008</td>
<td>1</td>
<td>.931</td>
<td>.970</td>
</tr>
<tr>
<td>Status</td>
<td>.538</td>
<td>.331</td>
<td>2.645</td>
<td>1</td>
<td>.104</td>
<td>1.712</td>
</tr>
<tr>
<td>Age</td>
<td>.131</td>
<td>.325</td>
<td>.163</td>
<td>1</td>
<td>.686</td>
<td>1.140</td>
</tr>
<tr>
<td>Length of Time in Academe</td>
<td>1.758</td>
<td>1.176</td>
<td>2.235</td>
<td>1</td>
<td>.135</td>
<td>.172</td>
</tr>
<tr>
<td>Academic Rank</td>
<td>1.523</td>
<td>1.194</td>
<td>1.629</td>
<td>1</td>
<td>.202</td>
<td>4.587</td>
</tr>
<tr>
<td>Tenure Status</td>
<td>.637</td>
<td>.335</td>
<td>3.615</td>
<td>1</td>
<td>.057</td>
<td>1.891</td>
</tr>
<tr>
<td>Previous Experience</td>
<td>-.626</td>
<td>.240</td>
<td>6.798</td>
<td>1</td>
<td>.009**</td>
<td>.535</td>
</tr>
</tbody>
</table>

*p<.05  **p<.01  ***p<.001

Table 4.4: Model Summary for Logistic Regression for Variables Predicting Engagement Participation (n = 248)
The final data analysis process for this part of the research question was to ensure that the model assumptions were not violated. To achieve power of .80 and a medium effect size, a sample size of 300 was required to detect a significant model in binary logistic regression (Hsieh, Block & Larsen, 1998). Here, we see that n=248 after the deletion of missing data, so method assumptions were violated. These results should thus be interpreted with caution.

In order to better understand the second half of the research question, an analysis of variance (ANOVA) was conducted for number of engagement activities participated in by academic cluster and results are presented in Table 4.5.

<table>
<thead>
<tr>
<th>Variable and Source</th>
<th>Df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Cluster</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>6</td>
<td>120.811</td>
<td>20.135</td>
<td>10.146***</td>
</tr>
<tr>
<td>Within Groups</td>
<td>429</td>
<td>851.391</td>
<td>1.985</td>
<td></td>
</tr>
</tbody>
</table>

*p<.05 **p<.01 ***p<.001

Table 4.5: One-Way Analysis of Variance for Effects of Academic Cluster on Sum of Participation in Engagement Activities

Tukey post-hoc analyses revealed that there were several significant differences among the mean scores of the academic clusters identified for the study, F(6, 429) =10.146, p<.001. Faculty in Education and Human Ecology (EHE) and Food, Agriculture and Environmental Sciences (FAES) (cluster four) had a statistically significant different (greater) mean score for the number of engagement activities than faculty in Art (ART),

7 Academic cluster was used to explore higher-order disciplinary differences due to the small number of respondents within some of the individual discipline categories.
Medicine (MED) and Allied Medicine (AMP) (cluster one), Business (BUS), Pharmacy (PHR), Biological Sciences (BIO) and Engineering (ENG) (cluster two) as well as Humanities (HUM) and Social and Behavioral Sciences (SBS) (cluster five). Other significant mean score differences detected in the Tukey post-hoc were between faculty in the College of Law (LAW) (cluster six) and faculty in the College of Social Work (SWK) (cluster seven) with faculty in HUM and SBS (cluster five) and faculty in (ART), Medicine (MED) and Allied Medicine (AMP) (cluster one). Here, the mean score for the number of engagement activities for faculty in both LAW and SWK were statistically greater than those in HUM and SBS and ART, MED and AMP. The mean score for number of engagement activities for faculty in SWK was also statistically different (greater) than the mean score for faculty in BUS, PHR, BIO and ENG (cluster two). The effect size for the analysis was .11, a medium effect size.\(^8\) Table 4.6 provides the mean for the number of engagement activities per academic cluster from least to greatest.

\(^8\) Omega squared was used to calculate effect size for ANOVA results. Omega squared is usually interpreted as: 0.15 or greater is large; between 0.06 and 0.15 is medium; between 0.01 and 0.06 is small; and, less than 0.01 is trivial.
Because race/ethnicity, status/rank were salient factors described in the literature review as explanatory variables for participation in engagement activities but did not prove to be statistically significant in the binary regression model, tests were conducted to compare the means for the number of engagement activities participated in during the current academic term for these variables as well. Responses for sum of engagement activities for the independent variables of race, tenure status and professional rank were compared using an ANOVA and the results are summarized in Table 4.7. While there were no significant differences detected among the mean scores of faculty from different race/ethnic backgrounds, there were significant mean score differences detected among faculty at different academic ranks, $F(2, 419) = 10.230, p < .001$ and with different tenure status, $F(2, 427) = 5.944, p < .01$. 

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluster 5: HUM/MPS/SBS</td>
<td>1.43</td>
</tr>
<tr>
<td>Cluster 3: DEN/VET</td>
<td>1.74</td>
</tr>
<tr>
<td>Cluster 2: BUS/PHR/ENG/BIO</td>
<td>1.78</td>
</tr>
<tr>
<td>Cluster 1: ART/AMP/MED</td>
<td>1.93</td>
</tr>
<tr>
<td>Cluster 6: LAW</td>
<td>2.83</td>
</tr>
<tr>
<td>Cluster 4: EHE/FAES</td>
<td>2.94</td>
</tr>
<tr>
<td>Cluster 7: SWK</td>
<td>3.00</td>
</tr>
</tbody>
</table>

Table 4.6: Mean of Number of Engagement Activities by Academic Cluster
<table>
<thead>
<tr>
<th>Variable and Source</th>
<th>Df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>5</td>
<td>13.631</td>
<td>2.726</td>
<td>1.228</td>
</tr>
<tr>
<td>Within Groups</td>
<td>413</td>
<td>916.679</td>
<td>2.220</td>
<td></td>
</tr>
<tr>
<td>Academic Rank</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>2</td>
<td>43.477</td>
<td>21.738</td>
<td>10.230***</td>
</tr>
<tr>
<td>Within Groups</td>
<td>419</td>
<td>890.390</td>
<td>2.125</td>
<td></td>
</tr>
<tr>
<td>Tenure Status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>2</td>
<td>25.737</td>
<td>12.869</td>
<td>5.944**</td>
</tr>
<tr>
<td>Within Groups</td>
<td>427</td>
<td>924.440</td>
<td>2.165</td>
<td></td>
</tr>
</tbody>
</table>

*p<.05   **p<.01 ***p<.001

Table 4.7: One-Way Analysis of Variance for Effects of Race, Rank and Status on Sum of Participation in Engagement Activities

Tukey post-hoc analyses indicated that the mean score difference was significant (greater) for the number of activities participated in for full and associate professors than assistant professors and those faculty who were already tenured versus those on a tenure track. The effect sizes for the ANOVAs above were .002 (trivial), .04 (small), and .02 (small), respectively.

Finally, because gender was expected to be statistically significant variable, a t-test was conducted for sum of engagement activities and gender. There were no statistical differences detected among the number of activities participated in by gender. The effect size was trivial ($d=.06$).

---

9 Effect size for t-tests were calculated using Cohen’s d and are interpreted as: large $d=.8$; medium $d=.5$; small $d=.2$; trivial $d = less than .2$. 

90
<table>
<thead>
<tr>
<th>Variable</th>
<th>Men (n=291)</th>
<th></th>
<th>Women (n=137)</th>
<th></th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sum of Participation in Engagement Activities</td>
<td>1.92 1.527</td>
<td></td>
<td>2.01 1.406</td>
<td>2.365</td>
<td></td>
</tr>
</tbody>
</table>

*p<.05  **p<.01  ***p<.001

Table 4.8: Sum of Participation in Engagement Activities by Gender

**Research Question 3**

We turn now to faculty communities and how engagement activities are valued and perceived. When looking at faculty and whether or not they feel engagement was important within their disciplines, a majority of faculty reported that engagement in community-based research, service-learning, outreach and engagement-oriented professional service and public service was at least somewhat important within their disciplinary fields (see Illustration 4.2). One noteworthy outcome related to disciplinary support for engagement activities was that more faculty reported that public service, often conceptualized as the service work faculty do as private citizens, was more essential to their discipline (n=60, 13.8%) than service-learning (n=44, 10.3%). Another important observation was that more faculty reported community-based research and service-learning as not important (n=90, 21.0%; n=114, 26.8 %) than essential (n=58, 13.5%; n=44; 10.3%).
Illustration 4.2: Frequency of Disciplinary Support for Engagement Activities

When looking at academic department, overall, many more faculty reported each engagement activity as not important to their department than faculty who reported engagement as essential (see Illustration 4.3). Some differences were also observed between academic discipline versus academic department in terms of levels of perceived support for engagement activities. For example, whereas only 13.3% (n=57) of faculty reported that public service was not important to their discipline, 32.1% (n=140) of
faculty reported that public service was not important within their academic department. The same observation was true with community-based research, where more faculty reported community-based research as unimportant within the academic department versus the discipline (n=90, 21.0% vs. n=134, 30.7%).

Illustration 4.3: Frequency of Academic Department Support for Engagement Activities
Professional community support was also examined and the frequencies of responses are presented in Illustration 4.4. The responses were very consistent with the responses to disciplinary support reported in Illustration 4.2.

Illustration 4.4: Frequency of Professional Community Support for Engagement Activities
When looking at the results for the questions examining university support for engagement, more than half of the faculty participating in the study either disagreed or strongly disagreed with a majority of the statements related to university support, including: an infrastructure exists to support faculty participation in engagement on this campus (n=243, 58.6%); there is adequate financial support for participation in engagement activities (n=296, 72.5%); faculty here are strongly committed to engagement activities (n=287, 69.0%); the current promotion and tenure system encourages faculty to participate in engagement activities (n=333, 81.3%); and engagement activities are among the top priorities of the university (n=224, 52.8%). Despite these results, 85.4% (n=363) of faculty either agreed somewhat or strongly agreed that participation in engagement activities is part of the university mission and 65.2% (n=275) of faculty either agreed or strongly agreed that university leadership supports engagement efforts.
Illustration 4.5: Frequency of University Support for Engagement Activities

As a further step in the analysis, responses to the questions concerning university support were subjected to t-test analyses where faculty who participated in ‘the’ package of engagement were compared to the responses of faculty who did not. The only significant difference detected in the mean scores of the questions concerning university support between these two groups of faculty was for the item regarding participation in engagement activities as part of the university mission (see Table 4.9). Here, highly engaged faculty had a significantly higher overall mean score, indicating they were more
likely to agree or strongly agree that engagement was part of the mission of the institution. The effect size was small ($d=0.19$).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Other (n=265)</th>
<th>Highly Engaged (n=171)</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Mission</td>
<td>3.04 .694</td>
<td>3.18 .739</td>
<td>7.267**</td>
</tr>
<tr>
<td>University Top Priority</td>
<td>2.37 .791</td>
<td>2.51 .856</td>
<td>1.969</td>
</tr>
<tr>
<td>University Leadership</td>
<td>2.66 .739</td>
<td>2.72 .791</td>
<td>.435</td>
</tr>
<tr>
<td>University Financial Support</td>
<td>2.13 .760</td>
<td>1.99 .718</td>
<td>1.316</td>
</tr>
<tr>
<td>University Tenure and Promotion</td>
<td>1.75 .789</td>
<td>1.81 .808</td>
<td>.000</td>
</tr>
<tr>
<td>University Infrastructure</td>
<td>2.23 .764</td>
<td>2.26 .836</td>
<td>-2.217</td>
</tr>
<tr>
<td>University Faculty Commitment</td>
<td>2.07 .742</td>
<td>2.24 .665</td>
<td>.078</td>
</tr>
</tbody>
</table>

*p<.05 **p<.01 ***p<.001

Table 4.9: Group Differences for University Support for Engagement Activities

In terms of faculty and responses to the questions regarding the environmental factors that might impact their ability to participate in engagement, more than half of all faculty either agreed somewhat or strongly agreed with every question related to the environmental issues that could be addressed to improve faculty participation in engagement (see Illustration 4.6). When considering which environmental changes would be the most impactful, the largest number of faculty (n=304, 72.7%) either agreed somewhat or strongly agreed that they would be likely to increase their engagement activity if grants and funding for engagement activities were more readily available. The second highest environmental change factor that would yield increased engagement
activity was related to support from institutional leadership for engagement. Seventy percent of faculty (n=285) either agreed somewhat or strongly agreed that they would increase their engagement activity if such work was more highly valued by university leadership. This finding was interesting given that 65.2% (n=275) of faculty either agreed or strongly agreed that university leadership already supports engagement efforts. When looking only at the strongly agree response category, the environmental factor most likely to encourage engagement appeared to be the restructuring of tenure and promotion policies to give weight to engagement activities (n=127, 30.2%) followed closely by the revision of evaluation documents to make it easier to account for engagement (n=104, 25.6%). In sum, from the results presented, it is clear that faculty at the study site appear to indicate the need for improvement in all categories.
The additional analysis of comparing the means for responses of faculty who participated in ‘the’ package of engagement activities to the responses of faculty who did not was also conducted on the environmental factors questions. No significant differences were detected in the means for any of the responses (see Table 4.10).
Table 4.10: Group Differences for Environmental Factors to Increase Engagement Participation

Research Question 4

Turning now to the conceptual model developed for the purposes of this study, in an attempt to sum up the outcomes of the literature review, a faculty engagement conceptual model (FEM) was developed. The model contains important variables hypothesized to influence faculty engagement participation and served as a first attempt in demonstrating and explaining faculty engagement behavior. The model postulated that three distinct dimensions exist— institutional, personal and professional—which impact faculty engagement participation. A principal components analysis was used to determine the underlying dimensions in the data. The correlation matrix indicated that correlations existed in the data set, and the Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .777 (middling score for the appropriateness of factor analysis). Given these results and
the results of the Bartlett's Test of Sphericity (significance level of .00), the data set seemed to be fit to proceed with interpreting the results of the factor analysis. The Kaiser criterion was used to determine the number of factors to retain and the data were rotated orthogonally using the Varimax orthogonal rotation and obliquely using the Promax rotation. Table 4.11 presents the results of the factor analysis\textsuperscript{10}. 

\textsuperscript{10} Institutional type, community involvement and prestige are included in the conceptual model but are not used in this analysis. Institutional type, prestige, and community involvement were not assessed since the pilot study took place at a single institution.
<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loadings</th>
<th>Factor Loadings</th>
<th>Factor Loadings</th>
<th>Factor Loadings</th>
<th>Factor Loadings</th>
<th>Factor Loadings</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Leadership</td>
<td><strong>.832</strong></td>
<td>.166</td>
<td>-.111</td>
<td>.720</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial Support</td>
<td><strong>.714</strong></td>
<td>.115</td>
<td>.208</td>
<td>-.189</td>
<td>.638</td>
<td></td>
<td></td>
</tr>
<tr>
<td>University Priorities</td>
<td><strong>.714</strong></td>
<td>.432</td>
<td>-.260</td>
<td>.129</td>
<td>.196</td>
<td>.616</td>
<td></td>
</tr>
<tr>
<td>Engagement Infrastructure</td>
<td><strong>.691</strong></td>
<td>.157</td>
<td>.117</td>
<td>.203</td>
<td>-.135</td>
<td>.602</td>
<td></td>
</tr>
<tr>
<td>University Policies (P&amp;T)</td>
<td><strong>.645</strong></td>
<td>.369</td>
<td>.155</td>
<td>.209</td>
<td></td>
<td>.532</td>
<td></td>
</tr>
<tr>
<td>University Mission</td>
<td><strong>.639</strong></td>
<td>.239</td>
<td>-.194</td>
<td>-.395</td>
<td>.380</td>
<td>.604</td>
<td></td>
</tr>
<tr>
<td>Faculty Involvement</td>
<td><strong>.634</strong></td>
<td>.486</td>
<td>.101</td>
<td></td>
<td>.131</td>
<td>.522</td>
<td></td>
</tr>
<tr>
<td>Prof Com Support</td>
<td>.262</td>
<td><strong>.848</strong></td>
<td>-.209</td>
<td>.120</td>
<td>.740</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discipline Support</td>
<td>.251</td>
<td><strong>.840</strong></td>
<td>.160</td>
<td>-.237</td>
<td>.120</td>
<td>.141</td>
<td>.749</td>
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<td>6.10</td>
<td>5.25</td>
<td>4.71</td>
<td>4.57</td>
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</table>

Table 4.11: Summary of Exploratory Factor Analysis Results for Faculty Engagement using Principal Components Analysis

As observed in Table 4.11 seven components were retained, explaining 62.2% of the variance. The first component could be named the institutional component, with the
seven factors measuring university support all loading together. Component two could be named the communal component, demonstrating that the underlying structure in the data is the same for the communities considered in this study—the professional community, disciplinary community, department community and graduate school training community. Next, the variables of academic rank, years in the professorate and tenure status comprise a component. This component was named professional status component. The fourth component could be named the personal component with gender, professional motivation, personal values and previous experience loading onto the factor. Only one variable loads onto each of the final three components. Because this was an unexpected outcome of the analysis, the scree plot was examined. Cattell's scree test recommends dropping all further components after the one starting the ‘elbow’ in the graph. When applying this test, rather than using the Kaiser criterion, it appears that only the first four components should be retained. Thus, the four components retained include the institutional factor, the communal factor, the professional status factor and the personal factor. Results indicated that perhaps revisions could be made to the conceptual model to better explain faculty engagement participation. This is discussed in depth in Chapter 5.

A stepwise regression was conducted with the dependent variable scale score of engagement hours per week (sum of hours spent on community-based research, service-learning, outreach-oriented professional service, engagement-oriented professional service and public service) to assess whether or not the study identified meaningful variables for explaining engagement participation. Table 4.12 summarizes the individual
regression coefficients for the five steps included in the best model of the regression
analysis for predicting faculty engagement\textsuperscript{11}.

\begin{table}[h]
\centering
\begin{tabular}{lcccc}
\hline
Variable & B & SEB & B & T & Sig. \\
\hline
Step 5 & & & & & \\
Discipline Engagement Level & 2.223 & .475 & .254 & 4.677 & .000 \\
Professional Community Support & .562 & .138 & .227 & 4.081 & .000 \\
Community Involvement & 1.762 & .523 & .185 & 3.368 & .001 \\
Length of Time in Academe & 1.160 & .451 & .136 & 2.570 & .011 \\
Previous Experience & -1.961 & .809 & -.128 & -2.426 & .016 \\
\hline
\end{tabular}
\caption{Table 4.12: Stepwise Regression Analysis Summary for Independent Variables Predicting Hours of Participation in Engagement (n=277)}
\end{table}

Excluded variables were professional motivation, personal values, discipline support, department support, university support, prestige, graduate school socialization, gender, race, family college attainment status, age, academic rank, tenure status and epistemology.

When looking at the sum of hours of participation in engagement activities, it appears the five variables that are predictors in the stepwise regression are discipline engagement level, professional community support, community involvement, length of time in academe and previous experience. Presented in Table 4.13, the R\textsuperscript{2} for the model was .269, a moderate R\textsuperscript{2} value, and the effect size (f\textsuperscript{2})\textsuperscript{12} was 0.37 (large). Thus, it appears that the variables in the model are moderate predictors of engagement yet, many of the

\textsuperscript{11} This analysis was run with and without outliers for the dependent variable. The removal of outliers improved the predictive ability of the regression model and thus is the model presented.

\textsuperscript{12} Effect sizes of 0.02, 0.15, and 0.35 are termed small, medium, and large for Cohen's f\textsuperscript{2}.
variables in the conceptual model developed for the study were excluded from the regression model. The implications of that outcome will be explored in Chapter 5.

<table>
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<th>Model</th>
<th>R</th>
<th>R²</th>
<th>Adj R²</th>
<th>F</th>
<th>Sig.</th>
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<td>.269</td>
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<td>19.976</td>
<td>.000</td>
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</table>

*a Predictors (constant), discipline engagement level, professional community support, community involvement, length of time in academe and previous experience.

Table 4.13: Model Summary for Stepwise Multiple Regression for Variables Predicting Sum of Engagement Hours

Open-Ended Response Data

Finally, open-ended response data was examined. Seventy survey respondents chose to write-in additional comments in the last question of the survey (16.0 percent). Sixty-one percent of open-ended respondents were male (n=43) and thirty-six percent were women (n=25). Seventy-five percent (n=53) were tenured faculty and 20 percent (n=14) were nontenured faculty. Several ideas emerged in the open-ended responses ranging from expressions of ambiguity about what exactly constitutes an engagement activity, to perceptions of the university’s mission and priorities as they relate to engagement, to explanations of individual engagement participation. The comments revealed no overall pattern. However, examples from the open-ended response question are used in Chapter 5, where they seem appropriate, to offer some context for the interpretation of the statistical analyses.
CHAPTER 5

DISCUSSION

Introduction

This dissertation study examined faculty participation in engagement activities through a pilot study at a large Midwestern land-grant university. The primary research questions focused on the methods of engagement utilized by faculty and the frequency of engagement participation among faculty members. It considered the personal, professional and institutional factors that impact engagement participation and examined the environmental factors that could be addressed in order to promote faculty engagement. Another objective of the study was to summate the literature related to faculty and engaged work and advance and test a comprehensive conceptual model for understanding engagement participation.

Overall, findings suggest that to some degree, faculty at the pilot site do participate in a wide array of engagement activities and, on average, contribute a substantial number of hours per week to engagement-oriented activities in light of other faculty roles and responsibilities. However, faculty are more likely to participate in engagement activities that take less time and preparation, such as public service, than time-intensive engagement activities that require careful planning but could be more
directly tied to faculty roles and responsibilities, such as service-learning or community-based research. Findings also suggest that at the study site institution, some academic departments, some disciplinary communities and some professional communities currently pose structural or cultural barriers to participation. Organizational efforts to institutionalize engagement as well as disciplinary and professional association attempts to elevate engaged faculty work would likely result in higher levels of engagement-oriented faculty activity.

Another major finding from the study is that the literature informing individual engagement activity participation (e.g., service-learning, public service) may not have the same predictive ability for explaining engagement behavior with a more comprehensive construct of faculty engagement. This finding may make clear a major limitation among current efforts to understand and promote faculty engagement. Alternatively, this finding could suggest that previous literature is weak in terms of predicting behavior among faculty at a research university. The literature informing individual engagement activity participation may not be as applicable as expected given that previous works have not specifically examined faculty engagement at RU/VH (very high research activity) institutions. For example, perhaps one way faculty at RU/VH’s differ from faculty at other types of institutions is that they may be much more likely to have cosmopolitan professional orientations (less attached to immediate milieu and broader access to potential reference groups) rather than local professional orientations (perceive work in terms of personal relevance, link perceptions to primary communities and limit reference
groups) and this may be a factor to consider in further studies on faculty and engagement work at institutions classified as RU/VHs (Mulkey, Dougan & Steelman, 2005).

Another important conclusion drawn by examining the open-ended response section for the survey was that despite attempts to improve the reliability of the survey, faculty at the study site demonstrated that there is still a lot of ambiguity around what engagement is and how faculty carry out engagement activities. Some faculty commented that they needed examples of each engagement activity in order to better understand if they were doing engaged work. A few faculty also listed activities they conducted and posed questions back to the researcher as to whether or not those activities counted as engaged scholarly work. Overall, at least 4.1 % (n=18) of faculty participating in the study reported that they found the definitions of engagement confusing and/or were uncertain about whether activities they carried out counted and if they did, how to classify those engagement activities. This finding was expected. Campus Compact (2006) notes that a lack of understanding of what engaged scholarship is and how it works serves as a major barrier to advancing engagement efforts at research universities.

More specific study results, analysis and conclusions are most effectively drawn by reviewing and interpreting the outcomes of each research question.

Interpretation of Research Findings

Research Question 1

As reported in Chapter 4, 76.8% (n=335) of the faculty in this pilot study participated in at least one engagement activity and overall, faculty averaged 6.6 hours of engagement work per week. Based on the data from 1993 National Study of
Postsecondary Faculty (NSOPF-93) conducted by the U.S. Department of Education’s National Center for Educational Statistics (NCES), Finkelstein, Seal & Schuster (1998) found that faculty at research universities work about 55 hours per week. If we apply these hours of work time per week to the current study, faculty at the study site spent about 12% of their time on engagement activity. This is substantial given that data from the NSOPF-93 indicate that faculty nationwide average about 6.3% of their time spent on service activity (Bellas & Toutkoushian, 1999). Faculty who participated in this research project did, however, note challenges to committing time to engagement work. One survey respondent reported:

A primary stumbling block for faculty participating in outreach/engagement/service-learning (at least in my discipline) is the tremendous number of hours we spend weekly just doing our job. Time for research to do the necessary grant-writing and foundation-laying work for meaningful outreach projects is minimal at best.

When looking at the results of the activities faculty participated in, more faculty at the study site chose to participate in the least time-intensive engagement activities of outreach and engagement-oriented professional service and public service. Faculty who participated in community-based research and service-learning averaged 6.24 and 5.37 hours of activity participation per week respectively, as compared to a mean for hours of participation in outreach-oriented professional service of 3.86, engagement-oriented professional service of 3.64 and public service of 2.26.

There were also higher levels of participation in outreach and engagement-oriented professional service. Previous research has made clear that service-learning and
community-based research are time-intensive activities (Abes et al., 2002). If such activities are not elevated to the same scholarly levels as traditional research within disciplinary communities and institutions, there are formidable barriers to participation. Faculty are often unaware of the literature that supports service-learning as an effective teaching and learning pedagogy and thus do not see how spending the time to design a service-learning course may eventually be beneficial to the teaching section of the promotion and tenure dossier (Diamond & Adam, 2004). The same holds true for well-designed community-based research. Because this work is perceived as applied rather than scientific and research universities place a higher value on traditional forms of scholarship, faculty oftentimes do not see the opportunities to conduct applied work that is both beneficial to the community while making significant contributions to the theoretical work being done in their field (Campus Compact, 2006; Holland, 2005).

An alternative hypothesis that may help explain how faculty chose to spend their engagement time is that faculty at research institutions are more likely to view their social networks as cosmopolitan rather than local. Faculty with cosmopolitan orientations are less attached to the immediate environment and more likely to identify with a wider range of reference groups. Since data show that the faculty at the study site are more inclined to conduct outreach and engagement- oriented professional service rather than, say, work with the university service-learning initiative to deliver a service-learning course in the local community, testing of a faculty professional orientation variable is warranted. It could be worthwhile to explore whether or not a cosmopolitan vs. local orientation
provides any predictive ability in terms of the types of engagement activities faculty participate in and/or the scope of participation.

Research Question 2

First, in the coding of the variables for the binary logistic regression analysis, it became clear that a significant number of faculty members (39.2%, n=171) are able to successfully integrate engagement into at least two of the three primary roles categorizing faculty work—teaching, research and service. There are some key factors that appear to make a difference in terms of explaining participation in ‘the’ package of engagement activity. Those factors are: disciplinary engagement level; professional community support; department support; and, epistemology.

The predictive power of discipline in the regression model was fairly consistent with previous literature. Previous literature indicates that faculty in the social sciences, health professions, education and social work are typically more likely to engage in service activities than faculty in the physical sciences and humanities (Abes et al., 2002; Antonio et al., 2000; Voglegesang et al., 2005). In this study, the academic clusters identified as having above average levels of disciplinary engagement included faculty in Law (Cluster 6), Social Work (Cluster 7), Education and Human Ecology and Food, Agriculture and Environmental Sciences (Cluster 4), Art, Allied Medical Professions and Medicine (Cluster 1) and Dentistry and Veterinary Medicine (Cluster 3). The academic clusters identified as having below average levels of engagement and characterized as such for the disciplinary engagement level variable included faculty in Humanities, Social and Behavioral Sciences and Math and Physical Sciences (Cluster 5) and
Business, Pharmacy, Engineering and Biological Sciences (Cluster 2). The results of the binary regression analysis indicated that discipline engagement level proved to be positively and significantly associated with participation in ‘the’ package of engagement activity; it is within the above average engagement level academic clusters where there were higher probabilities that faculty would integrate engagement into two or more of their faculty responsibilities.

Previous research provides explanation for lower engagement levels within some disciplines and those explanations are consistent with the results of this study. Faculty in Physical and Biological Sciences as well as Mathematics and Engineering often note difficulty in incorporating engagement into their work because of relevance to their disciplines, not because of lack of personal belief that these activities are important (Voglegesang et al., 2005). One faculty member in an academic cluster identified as having a below average level of engagement stated, “This survey does not take into account that some disciplines by virtue of their subject matter are more suited to community engagement than others.” Other faculty members commented:

I learned something about myself in this survey and appreciate your efforts. For example, I value public service tremendously. However, I realized that my work environment does not appear to value these activities…and thus, has influenced my decision to not pursue these interests. It is a shame.

My specialty is Japanese. There is little opportunity or external demand for me to do community outreach involving my scholarship in this area despite the large Japanese industrial presence in Central Ohio. Instead, I do volunteer work for chamber music and chamber music education in Columbus, pursuing my vocational interests.

Thus, while faculty in Law, Social Work, Education and Human Ecology, Food, Agricultural and Environmental Sciences, Art, Allied Medical Professions and Medicine
and Dentistry and Veterinary Medicine proved to be the most successful at integrating engagement into their scholarship in this study, faculty in other disciplines often indicated that they valued service-oriented activities, even though they were not personally engaged. Consistent with previous literature, this outcome suggests an important distinction between beliefs and opportunities for participation.

The significance of professional community support, department support and epistemology in predicting participation in ‘the’ package of engagement activity is also consistent with prior research. In this study, faculty professional community support for participation in engagement activities seemed to be one of the most important variables in predicting the odds of participation in ‘the’ package of engagement activity. It can be concluded that faculty within professional communities where engagement is valued are provided a meaningful source of external motivation to participate. Lack of professional community support therefore serves as a deterrent. A quote from a study participant within an academic cluster identified as having a low level of engagement demonstrates that even while some faculty are socialized to participate, the norms of the professional community impact the actual engagement levels achieved. The participant stated, “My doctorate is in Education Policy and Leadership where outreach and engagement is encouraged. However, my profession…does not promote involvement or research in community / public service.”

The odds of participating in the package of engagement activity decreased with faculty perceptions of lower levels of department support for engagement. Faculty who did not feel their department supported these efforts were thus less likely to take on
engagement work. This comes as no real surprise. In a national study, faculty reported that public service fell well below other factors considered for the promotion and tenure processes, which occur primarily at the departmental level. It seems reasonable that faculty, in general, would perceive that what is valued at the department level is more traditional scholarly work and thus would be less inclined to take on engagement activity unless there were clear channels of support within the department and/or demonstrations of this work counting in promotion and tenure processes.

Epistemology also served as an important predictive variable. Many scholars contend that epistemology is at the core of individual faculty decisions about their academic work (Colbeck & Wharton-Michael 2006). It was expected that faculty who take a more traditional approach to knowledge and who believe that knowledge is absolute and should be obtained through unbiased inquiry would be less likely to integrate engagement into their academic work. This conjecture proved to be true; the odds of participating in ‘the’ package of engagement activity decreased for faculty with more traditional views of scholarship.

One observation from the pilot study that differed from previous work was gender and how gender relates to faculty engagement participation. In this study, being female did not prove to be a significant factor in predicting engagement participation. The literature review revealed research findings indicating that women faculty were more likely to participate in service (Antonio et al., 2000; Hurtado et al., 2005; O’Meara, 2002). One proposed explanation for the differing outcome reported for this study versus previous research is that previous research does not focus on engagement participation.
for women at research universities. Women at research institutions in particular are often considered a minority population and are therefore subjected to more demands for internal university service while also oftentimes dealing with chilly climate issues (Horning, 2003). The demands for internal service and climate issues may also explain why race/ethnicity was not a salient factor in explaining engagement in this research study but was often deemed the most important explanatory variable in previous work (Antonio, 2002; Antonio et al., 2000; Baez, 2000; O’Meara, 2002; Voglegesang et al., 2005). A closer look at survey demographic information by gender and race/ethnicity and by academic status/rank may yield insight on why results from this study differ from previous research.

As noted in Chapter 4, although rank/discipline did not prove to be significant variables in the binary logistic regression, when an ANOVA was conducted for sum of engagement activities by tenure status and academic rank, the mean scores for both variables were significant with tenured faculty engaged in more activities than nontenured faculty and with associate and full professors engaged in more activities than assistant professors. The demographic data indicates that 68.3% (n=198) of the men in the sample were tenured compared to 56.2% (n=77) of the women. At the other end of the spectrum 27.0% (n=77) of men were at the assistant professor rank versus 37% (n=50) of women. Because it was postulated that higher faculty status/rank enables more opportunity for engagement participation (e.g., faculty act on their intrinsic motivation for public service once the extrinsic motivation (tenure) has passed) and motivation is often used to explain why women and faculty of color are more likely to participate in
these efforts, these demographic data might help explain why the results of this study
differ in terms of the predictive ability gender (Jaeger and Thorton, 2006). A few survey
comments from female study participants also yield insight into how women at the
research university study site may demonstrate behavior dissimilar from women as a
whole in previous research:

I am an assistant professor with two children under the age of 4. That
combination does not leave much time for activities not directly related to what's
necessary for P&T. It's all I can do to keep my research, teaching, and
departmental service on track.

I have taught in academe many more years than my tenure-track hire (as adjunct,
as visiting assistant professor), and my promotion to associate and tenure has only
JUST happened (a month ago), so this may be a mitigating factor in
understanding my responses. Most of my outreach/engagement efforts have been
directed towards elementary and secondary schools, and I have…[been] met with
almost no support from my department and field for doing so… I NEVER say no
to a community request for my involvement, whether it is giving a free lecture
about my discipline at a local high school or speaking at a public gathering, but
aside from these kinds of activities, I stopped trying to pursue engagement until I
was tenured.

The same outcomes hold true for minority faculty. Whereas 67.5\% (n=220) of
white faculty in the study held tenured status only 52.1\% (n=48) of faculty of color in the
study held the same status. Moreover, 43.8 \% (n=39) of faculty of color were at the
assistant professor rank versus 26.8 \% (n=86) of white faculty. If faculty wait to pursue
engagement work until after tenure and associate professor rank have been achieved, the
fact that women and minority faculty are most highly represented among non-tenured and
assistant professor status may explain why these outcomes are inconsistent with previous
work.
Another possible explanation for the lack of predictive power of race and gender could be the distinction between motivation/beliefs and the activities actually carried out by faculty. When looking back on the literature review, it becomes clear that a good portion of the literature supporting the importance of gender/race serving as a significant factor in predicting engagement is based on motivation and or values/beliefs, not actual observations of behavior. For example, faculty of color often indicate higher levels of motivation for entering the professorate based on opportunities to effect social change. Women are more likely to believe that universities should work with the community and that community service should be a requirement for graduation. In this study, the researcher based conclusions mostly on behavioral data rather than values and beliefs. Perhaps future research should more closely examine whether the values and beliefs of minority and women faculty actually align with the engagement-related behavior they carry out.

Research Question 3

In trying to draw conclusions about how faculty perceive and experience engagement, responses to faculty questions related to the relative value of engagement activities within the academic discipline, department, professional community; institutional support for engagement; and, the open-ended field were examined. A majority of faculty reported that engagement activity was at least somewhat important within their disciplines. Thus, while faculty commented that some disciplines are better suited for carrying out these activities, most faculty at the study site felt there was some importance placed on engagement within the disciplinary community. This suggests that
work being lead by Diamond and Adam to encourage disciplinary communities to create broader views of scholarship for the 21st century may be effective. One respondent in a discipline characterized in this study and in previous work as a discipline which demonstrates a low level of engagement responded:

The importance of the issues your questions are based on is increasing in engineering in general. Civil and environmental engineering is probably ahead [of other engineering fields] on these issues.

On the other hand, when compared to academic discipline, fewer faculty reported that engagement activities were very important or essential to their academic department. This outcome was expected. As stated in the results from research question 2 and in the literature review, in previous faculty studies, faculty reported that public service fell well below other factors considered for the promotion and tenure process (Fairweather, 1996). It is within the academic department where the tenure and promotion process is initiated and service on the tenure dossier is internal service to the university rather than service to the external community. It seems appropriate that faculty would report lower levels of importance within the academic department than within the academic discipline. It does, however, appear that within some departments at the study site, more is being done to support engagement. One respondent stated:

[My] college does have a community engagement grants program that provides small grants for cooperative research projects. This is a good start for the college and university, but I think much more needs to be done.

Another important observation in the data was that when asked to report about the importance of engagement activities within the academic department, discipline and professional community, larger numbers of faculty report service-learning and
community-based research as unimportant when compared to public service. This outcome suggests that the specific literature and dialogue attempting to elevate community-based research and service-learning to the same level as traditional scholarly work has not yet permeated most faculty social networks, at least not for the faculty at the study site. This finding was not surprising despite some evidence that the post-Boyer literature and scholarly work being done to expand definitions of legitimate scholarly activity is promoting change. This finding also emphasizes the importance of an institutional infrastructure in order to move these efforts forward.

We now turn to institutional support for engagement. Although a majority of faculty at the study site agreed somewhat or strongly agreed that participation in engagement activities were part of the university mission and that university leadership supported engagement efforts, more than half of the faculty participating in the study either disagreed or strongly disagreed with a majority of the statements related to university support, including: an infrastructure exists to support faculty participation in engagement on this campus; there is adequate financial support for participation in engagement activities; faculty here are strongly committed to engagement activities; the current promotion and tenure system encourages faculty to participate in engagement activities; and, engagement activities are among the top priorities of the university. In terms of faculty and responses to the questions regarding the environmental factors that might impact their ability to participate in engagement, more than half of all faculty either agreed somewhat or strongly agreed with every question related to the environmental issues that could be addressed to improve faculty participation in
engagement. This demonstrates that faculty have at least a baseline interest in applying their scholarly pursuits to addressing real world problems, and that the institutional context did not adequately support the translation of interest to action.

There were some interesting findings that need further elaboration when considering the results of the questions related to the barriers to participation and the environmental factors that could be changed in efforts to promote engagement. Even though faculty at the pilot study generally felt that engagement was part of the mission of the university and that university leadership supported engagement, it appears that issues of rhetoric vs. reality exist since more than half of all survey respondents also indicated that more support from university leadership would be a key factor in increasing engagement participation. A few study participants called forth the issue of rhetoric vs. reality in their open-ended responses. One faculty member commented:

Overall, [the] University does not see its 'land grant' status as important... administration is more concerned about its numerical ranking in US New and World Report than outreach to the communities of… Other land grant institutions that I have either attended as a student or was employed as faculty had administrations that valued community outreach more than… --not with lip service --but with people and financial support.

As stated in Chapter 4, when considering which environmental changes would be the most impactful, the largest number of faculty (72.7%, n=304) either agreed somewhat or strongly agreed that they would be likely to increase their engagement activity if grants and funding for engagement activities were more readily available. This finding is consistent with the work of Jaeger & Thorton (2006) who found that faculty reported that the scarcity of both institutional fiscal resources and individual compensation to support faculty public service work were major deterrents to participation. Faculty participants
also called forth the issue of funding in open-ended responses. One faculty member stated:

I have brought in nearly $6 million in grants over my career. I do engagement and outreach activities, because I believe in helping others. However...the only things that really matter in my promotion process and annual evaluation are bringing indirect cost recovery to the university, and publishing in peer-reviewed journals. The rest is given lip service only. Show me the funding opportunities, and I will do what I believe to be 'right' regardless of how it enters into promotion or tenure.

The results reported in Chapter 4 also made clear the impact of the promotion and tenure process in understanding engagement activity. When looking only at the strongly agree response category, the environmental factor most likely to encourage engagement appeared to be the restructuring of tenure and promotion policies to give weight to engagement activities. Faculty comments provided additional support for the idea that faculty feel they must first and foremost carry out the work that gets recognized and rewarded in the tenure and promotion processes. One respondent stated:

I believe that the current poor funding climate has made it difficult for assistant professors to engage in more community-based or outreach type of activities. The largest time requirement in my professional life is grant writing. In the past 3.5 years, I have averaged over 15 grant submissions per year, and most have had funding lines at less than 10%. While I wish I could give back more to the community, securing national funding is the highest priority as I approach my 4th year on tenure track.

In sum, when looking at the current institutional climate and environmental issues, several barriers to participation, which are consistent with the research, were identified. Reforming the rewards system to encourage engaged scholarship and providing support for faculty to seek out and secure funding for engaged work appear to be the biggest obstacles to increasing current levels of engagement.
Research Question 4

This first part of RQ4 examined the effectiveness of the conceptual model developed for the study. While results of the factorial analysis confirmed some of the dynamics hypothesized in the development of the FEM, the outcomes of the pilot study suggest some reframing of the model. The FEM hypothesized that three primary dimensions would be retained by the factor analysis—the institutional, personal and professional—for explaining faculty engagement. The actual outcomes of the factorial analysis and the researcher’s interpretation of the data yielded four factors, and those factors were designated the institutional, communal, professional status and personal factors in Chapter 4.

Based on the pilot study, the best developed factor of the model was the institutional component. All of the variables originally hypothesized to load onto the institutional factor of the FEM and tested in the factor analysis held true in this study, with the outcomes of the analysis indicating that the variables of university leadership, financial support, university mission and priorities, engagement structure, institutional policies and faculty involvement indeed comprise an institutional component when looking at the underlying structure of the data. It is still hypothesized that community involvement, institutional type and prestige would load on the institutional factor; however, because the study took place at a single institution, those variables were not included in the analysis of this study. The results of this outcome are consistent with the previous work of Holland (1997) and the Kellogg Commission (1999).
The next two factors advanced were the communal factor and the professional status factor. When looking at the communal factor, there was some departure from expected outcomes. The underlying structure of the data suggested that discipline support, department support, professional community support and graduate school socialization should all be grouped together; this outcome was hypothesized based on the literature review. However, it was also expected that faculty rank, status, length of time in academe, professional motivation and discipline would also load onto the same factor—originally named the professional factor—in the testing of the FEM. Most of these variables (faculty rank, tenure status and length of time in academe) all loaded together on the next factor (named professional status in Chapter 4).

Oddly enough, discipline did not load with any other factor in this study. It would be interesting to see if this same finding would hold true in a multi-institutional study where the sample would be large enough to drill down to the specific academic discipline, rather than academic cluster, for analyses related to discipline. Because of the uncertainty of the cause of this outcome, the researcher chose to retain discipline within the professional status domain for further research. Other relevant changes to the professional status domain of the FEM can be suggested based on the results of the analysis: (a) removal of motivation from the professional domain of the SFE and the FEM and (b) the addition of a professional orientation variable to the professional status domain of the model.
We now turn to the personal component. It was expected that race/ethnicity, gender, family college attainment status, values and previous experience would comprise the personal domain of the FEM. In the actual analysis conducted for the study, gender, previous experience, personal values and professional motivation proved to be the variables that loaded onto the fourth component of the factor analysis. It was not anticipated that professional motivation would load with the other personal factors named, yet the congruency between professional motivation and personal values was noted by an expert review participant and also discussed in the literature review (Boyer, 1990; Ward, 2003). The outcomes of this analysis confirm assertions that there is little difference between what faculty value personally and what motivates them professionally. As stated above, based on this finding, perhaps a more suitable variable for the professional status domain of the FEM would be a professional orientation variable (local vs. cosmopolitan). A personal motivation variable that focused more specifically on whether or not survey respondents were intrinsically vs. extrinsically motivated and also assessed the personal value placed on community service would be more appropriate.

Family college attainment status did not load with any other factor nor appear significant in any of the analyses and is suggested for removal from the SFE and FEM. Epistemology also loaded as a single factor. As noted in Chapter 3, in this pilot study the scale of items used to measure epistemology did not meet the scale reliability criteria set by the researcher and only one question was used to examine faculty epistemology in the data analyses of the study. Hence, when trying to determine why epistemology did not
load with any other variables in the study in the factorial analysis, the only potential explanation for this outcome is that perhaps a better set of questions for identifying whether or not a faculty member takes an objectivity approach versus a solidarity approach to knowledge development would yield a different (the expected) outcome. Finally, one other unexpected outcome was that race did not load with any other variable in the study. This is a perplexing outcome for which the researcher can offer little explanation. Thus, race should be assessed again in future studies to see if the same outcomes hold true in a larger, multi-institutional study. Here also, the variables (epistemology and race) have been retained in their original domain in the FEM until further research can be conducted.

Another important change made in the revised FEM is the relationships among the factors. Based on the results of this analysis, more attention was directed toward the directional arrows connecting the elements of the model. Here, we see that the institutional, communal, professional status and personal dimension are hypothesized to directly impact faculty engagement and that institutional support also impacts two variables in the professional status domain—socialization and department support—and visa versa.

Based on these outcomes, the revised FEM is presented below.
Illustration 5.1: Revised Faculty Engagement Model
Finally, when looking at the latter elements of RQ4 and specifically the stepwise multiple regression and how those results relate to whether or not the SFE identified meaningful variables, some of the variables identified here were consistent with the logistical binary regression, with discipline engagement level and professional community support serving as the top predictive variables in the model. Community involvement, length of time in academe and previous experience also proved to be significant here.

Previous experience seems to be a very important factor when considering other data in the study and the outcomes of previous research. The current body of literature makes clear that faculty at research institutions in particular have been socialized toward traditional views of scholarship and are infrequently exposed to mentors who participate in engaged work during their academic training (O’Meara, 2006). In this study, for example, 38.9% (n=167) of the faculty report no exposure to faculty engaged in service-learning during their graduate school training compared to only 8.4% (n=37) of faculty who report frequent exposure. For community-based research, 33.6% (n=156) of faculty report no exposure vs. 15.8% (n=68) of faculty who report frequent exposure. Given the lack of attention spent on preparing faculty for public and engagement-oriented work and also the lack of engagement socialization during graduate school training, it comes as no surprise that previous experience in community-based work is a variable that provides predictive power in the regression model. Faculty who have worked as community partners or in public service roles likely have a better understanding of the benefits of
engagement work and/or have some know-how of effective university-community partnerships. One faculty member stated:

I took a two-year leave of absence in the 80's to work...[in public service]. In that capacity, I discovered how vital academic work COULD be to the promotion of the public good. But to do it, you have to take a leave--there is not enough time if you are a full-time academic.

The final variable identified when looking at the sum of hours, rather than whether or not faculty participated in ‘the’ package of engagement activity was length of time in academe. This finding is consistent with the work of Krahenbuhl (1998) and others who characterize faculty work in lifecycles, contending that academic life should (and indeed does) change over time as faculty work evolves; faculty dedication to teaching, research and service should experience different highs and lows in terms of time spent on responsibilities over the span of a career. Rice (1996) proposes the notion of the complete academic, where a faculty member can focus on different aspects of their career at different times and Ward (2003) contends that expanded views of scholarship help reignite stalled faculty— that service-learning provides a means for trying something new for a faculty member no longer excited about her classes. Alternatively, for a faculty member stalled out on research, a community-based research project may enable him to tap into expertise in new ways. Based on this literature and the significance of length of time in academe rather than tenure status/rank in the regression model, it is suggested that length of time in academe be a variable retained in further analyses, even though it is highly correlated with the variables of tenure status and academic rank.
Implications for Research

This study holds several implications for future research on faculty engagement participation, both quantitative and qualitative. On the qualitative side, the faculty voices that emerged in the open-ended response question gave rise to a primary concern within the engagement movement; that is, faculty ambiguity about what engagement is and what activities count for engaged faculty work. Conducting a qualitative study where faculty members are provided with examples of engagement activity and encouraged to draw similarities among the examples and their own work would serve as an important step in assessing the reliability of the results of quantitative studies like this one. Perhaps faculty unfamiliar with Boyer’s Scholarship Reconsidered and the engagement movement are conducting activities that have a public benefit or public good outcome but are unable to identify those outcomes on their own. Such studies could also help improve the definitions of engaged work advanced here. This type of research would add tremendously to the current body of literature in that it could derive more information about the nuances detected in this study and other work, such as whether or not engagement activity is underreported in quantitative studies which impose precise definitions in order to quantify activity.

In terms of the survey and its potential for broader use, the results of this study indicate that several meaningful variables were identified in the SFE. While not all of the variables in the SFE proved to be significant in explaining engagement behavior, it was a useful tool in exploring the factors hypothesized to explain engagement participation through pilot-testing. The instrument should be refined and used in a multi-institution
study to better understand some of the unpredicted outcomes from the pilot study and to allow for the generalizability of results. Revisions necessary for the survey include developing a stronger scale to represent the variable ‘epistemology’, developing a new scale that focuses more directly on internal vs. external motivation and faculty beliefs about the importance of community service work rather than professional motivation, removal of the first generation status variable and the inclusion of a new scale to represent a professional orientation variable. A future study at diverse institutions would also allow for new/more meaningful analyses by institution type, academic discipline and permit the inclusion of variables which were not fully utilized in the single-institution pilot study, such as community involvement and institutional prestige. The updated version of the FEM should be used as the conceptual foundation for future engagement research. Continued testing and revision of the FEM may eventually lead to a model that accurately predicts and explains faculty engagement participation.

Implications for Practice

This dissertation study yields several implications for practice. Similar to the implications for research, it is clear that more needs to be done institutionally to define engagement and its value to the institution/profession and in promotion and tenure policies. While many scholars have proven to be very influential in challenging traditional notions of faculty work, the body of literature on new forms of scholarship (e.g., scholarship of application, integrated scholarship, outreach scholarship, professional service, public scholarship, scholarship of engagement) suffers from one

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13 These variables could be assessed by the researcher ahead of time through institutional research and interviews and later loaded with the survey data.
serious limitation: it does not provide suggestions on how to decrease ambiguity around what counts as engaged scholarly work or yield clear guidelines for institutional strategic planning and/or the development of assessment mechanisms (Glassick et al., 1997).

The lack of overall attention to assessing and evaluating engaged work poses barriers to participation. This is demonstrated in the data of the pilot study via the small number of faculty who engaged in community-based research and service-learning coupled with the results from the environmental factors section which indicate that changes to the faculty evaluation system would encourage faculty engagement participation. Glassick et al. (1997) state “it has become clear…that an essential piece is missing. The effort to broaden the meaning of scholarship simply cannot succeed until the academy has clear standards for evaluating the wider range of scholarly work” (p. 5). As long as faculty are unaware of the opportunities or potential benefits of conducting activities like community-based research or service-learning and without mechanisms to elevate engaged work to the same level as traditional scholarship, there is little to no incentive for faculty to carry out these activities. One survey respondent’s open-ended comments relate well to this challenge:

Most of the community based activities including research are self-initiated. There is neither recognition nor reward for such activities in the system. The biggest gratification for engaging in community based activities comes from the recipients of such efforts. Universities really don't care except for the PR that comes associated with it.

In order to address these issues as well as the issues of rhetoric versus reality called forth in the study, institutional definitions of engagement must be developed. Those definitions however, must remain broad to encourage the participation of faculty
from various backgrounds and disciplines. Moreover, faculty new to engagement need resources and support to make connections among their work and engaged scholarship.

After these fundamental items are addressed, engaged faculty benchmarking must occur. One of the main themes in the limited body of literature related to benchmarking engagement is that performance indicators for outreach and engagement activities should not vary significantly or differ greatly from the benchmarks for more traditional forms of scholarly work (Committee on Institutional Cooperation 2005; Diamond & Adam, 1995; Driscoll & Lynton, 1999; Driscoll & Sandmann, 2004; Glassick et al., 1997; Lynton, 1995; O’Meara, 2002). Table 5.1 provides some basic institutional, professional and personal benchmarks which can be used by faculty as they select, plan and implement engaged activities. Yet, even if institutions are serious about adopting engagement assessment models, there are barriers in terms of a lack of qualified individuals to do this type of assessment.
However, setting benchmarks for engaged work will not yield meaningful change if institutional and disciplinary incentives do not exist to reward engaged scholarship. Similar to the results of this study, Campus Compact (2006) notes that “many believe that traditional disciplinary-focused research approaches endure primarily because of a strong set of incentives that reward them, including expectations with respect to National Research Council rankings and publication in academic journals” and as a result, organizational rewards are structured around ensuring the ongoing flow of research dollars instead of research that results in improving other aspects of society (Campus
Compact, 2006, p. 18). Yet, there are tools available for institutions which are serious about elevating engaged scholarly work. The National Review Board for the Scholarship of Engagement provides criteria which can be adapted and implemented on an institutional basis. Table 5.2 presents those criteria.
Goals/Questions
Does the scholar state the basic purpose of the work clearly?
Does the scholar define objectives that are realistic and achievable?
Does the scholar identify intellectual and significant questions in the field?
Is there an academic fit with the scholar’s role, departmental/university mission?

Context of theory, literature, best practices
Does the scholar show an understanding of existing scholarship in the field?
Does the scholar bring the necessary skills to the work?
Does the scholar bring together the resources necessary to move the project forward?
Is the work intellectually compelling?

Methods
Does the scholar use methods appropriate to the goals or questions?
Does the scholar effectively apply the methods selected?
Does the scholar modify procedures in response to changing circumstances?
Does the scholar describe rationale for selection of methods in relation to context and issue?

Results
Does the scholar achieve the goals?
Does the scholar’s work add consequentially to the field (significance)?
Does the scholar’s work open additional areas for further exploration?
Does the scholar’s work achieve impact or change? Are those outcomes evaluated?

Communication/Dissemination
Does the scholar use a suitable style and effective organization to present the work?
Does the scholar use appropriate forums for communicating work to the intended audience?
Does the scholar communicate/disseminate to multiple audiences?
Does the scholar present information with clarity and integrity?

Reflective Critique
Does the scholar critically evaluate the work?
Does the scholar bring an appropriate breadth of evidence to the critique?
Does the scholar use evaluation to improve the quality of future work?
Does the scholar synthesize information across previous criteria?
Does the scholar learn and describe future direction?


Table 5.2: Criteria for the Assessment and Evaluation of the Scholarship of Engagement
Another important missing link is funding. Even if institutions create a rubric for evaluating faculty work and faculty create benchmarks for engaged scholarship to help them select appropriate projects and document engaged work, there has to be funding in order to sustain engaged efforts. Some national funding sources, such as the National Science Foundation, The Department of Housing and Urban Development, The Department of Agriculture, The Department of Energy, private foundations and state agencies are starting to recognize the need for a public good outcome as criteria for funding projects. Yet, in order to move engagement from rhetoric to reality, institutional support for securing external funding as well as some financial commitment at the institutional level is essential.

Benchmarking, documenting evaluating and setting aside funding to sustain engaged work are not easy tasks. They are demanding and rigorous work. Nonetheless, the results of this study seem to indicate such work is vital if institutions of higher education want to respond to calls for demonstration of public value.

Finally, another important implication for practice has to do with preparing engaged scholars. “Research universities provide the bulk of graduate education and, thus, can serve as a major pipeline for tomorrow’s faculty and administrators skilled in engaged scholarly work” (Campus Compact, p. 20, 2006). The rationale here is that if graduate students were socialized for engaged scholarship they would apply those approaches to their faculty work, becoming powerful information and practice disseminators. Unfortunately, as demonstrated in this study, faculty with the least status (assistant professors, nontenured faculty, women and faculty of color) were also the least
likely to participate in engagement. So, while faculty socialization is an important consideration, even if faculty were trained to become citizen-scholars during graduate education, other longstanding cultural issues in the academy need to be addressed (e.g., chilly climate issues) before graduate socialization toward engagement will prove to be a meaningful effort in advancing the engagement movement.

While this study indicates that more faculty are interested in conducting engagement activities such as service-learning and community-based research, especially if they were more highly valued by the institution, faculty at research institutions in particular may not know where to begin. A tendency to distinguish external organizations and relationships as separate from the institution is a stumbling block for faculty at research universities (Campus Compact, 2006). Engaged scholarship requires faculty to work with the community and faculty at research institutions are often underprepared for such public roles (Checkoway, 2001). It is unlikely that faculty at the study site were socialized or trained on how to successfully enter communities or carry out engagement-related scholarly work during graduate school or early in their careers. Thus, if institutional training or support does not exist, most faculty will avoid tackling these challenges. Research suggests that this ‘citizen-scholar’ training and support needs to be offered to both current faculty and graduate students preparing for academic roles. Graduate school training and socialization toward traditional definitions of scholarship served as a barrier to expanded views of faculty work for newly recruited faculty at research institutions in O’Meara’s (2006) study. O’Meara (2006) found that the more research-oriented an institution is, the more that values and beliefs about scholarship,
disciplinary influence and the nature of faculty careers serve as significant barriers to implementing contemporary interpretations of faculty work. The challenges identified by O'Meara, which have been specifically identified for faculty similarly-situated to faculty at the study site, are important considerations when interpreting the results of the study. Some of these challenges were perceived among study participants. One participant stated:

Community service, engagement and outreach are key to my view of our mission, but they fall under service. Service is clearly the least important of the three legs of the academic table at a Carnegie RU/VH classified university. Our primary missions must be scholarship and education first and service when it makes sense or when opportunities avail themselves. If our mission and classification were different, then service might take a more prominent role, but as it is, faculty don't have a lot of opportunity to actively seek out service at the expense of scholarship and teaching. This is just not as important at a flagship university as it would be at a more regional university.

Conclusion

This dissertation study examined faculty participation in engagement. It is clear from this project that faculty can play a role in renewing the civic mission of higher education and many faculty generally have an interest in participating in work that can be impactful beyond the ivory tower. The legitimization of the scholarship of engagement, however, should be viewed as a major reform. Many considerations related to human resource, structural, political, cultural and symbolic factors often prevent reforms like the engagement movement from ever fully taking root in our system of higher education (Bolman & Deal, 1997). From this study, the potency of these considerations becomes apparent. Several structural barriers to participation in engagement, such as promotion
and tenure and funding priorities, have been identified. Cultural barriers also exist which run contrary to the idea of faculty serving as citizen-scholars and these barriers begin to take shape during graduate school socialization. In order for faculty engagement to move beyond its current state, many issues of rhetoric vs. reality need addressed. More work also needs to be done to understand faculty professional networks and how those contexts shape faculty perceptions about what constitutes scholarly work.

In terms of the specific outcomes of the data presented here, many of the findings of this study support previous research findings for understanding and predicting faculty engagement behavior. Some nuances did exist, and there are many questions yet to be explored, such as whether or not some of the differences detected are specific to faculty at research universities.

The SFE and the FEM model proved to be robust tools for an initial study to explore a broader conceptualization of faculty engagement participation. These tools, however, need additional testing and revision before they can be utilized for institutional decision-making. As more and more institutions are turning toward engagement work in efforts to demonstrate accountability in the face of state budget cuts and dwindling public support, the SFE and FEM offer one means university leadership might use to explore factors in their current environments which promote or inhibit the establishment of programs to support the public service aspect of their institutional mission. As such, these tools may prove to be effective in facilitating the advancement of the engagement movement.
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APPENDIX A

EXPERT PANEL (CONTENT VALIDITY) MATERIALS
Hi______.  

Greetings! My name is Amy Wade and I am a doctoral candidate working with Dr. Ada Demb in Educational Policy and Leadership at The Ohio State University. My dissertation examines faculty participation in outreach and engagement activities. One of the main objectives of my study is to provide precise definitions and measurement parameters for engagement. Additionally, it builds upon research that has considered the organizational, personal and professional variables related to the service-oriented involvement of faculty by constructing and testing a faculty engagement model (FEM) (attached).

The primary research questions of my study are: (1) How do faculty participate in engagement-related activity, and how often? (2) When considering action-based research, service-learning, and, public and professional service activities as ‘the’ package for engaged faculty work, what variables help explain behavior? (3) How do faculty perceive and experience engagement? What conditions would motivate faculty to expand engagement involvement? What conditions would deter? (4) How useful is the conceptual model developed for this study?

The effectiveness of my study relies on the construction of an instrument that can test my conceptual model. In the model, the three primary components hypothesized to impact faculty engagement are:

**Personal Factors:** Race/Ethnicity; Gender; Age; Motivation; Values and Beliefs; Family College Attainment Status

**Professional Factors:** Status/Rank; Discipline; Graduate Education Socialization; Professional Association; Current Department Support; Length of Time in Academe

**Institutional Factors:** Mission and Priorities; Institutional Type; Leadership; Budget; Prestige; Engagement Structure; Hiring and Reward Policies; Faculty Involvement; and, Community Involvement.

I am writing today because I would appreciate your assistance in reviewing The Survey of Faculty Engagement (SFE) (attached in draft form—I will enter it into an online survey system once final changes have been made). If you agree to help, I ask that you fill out the Panel of Experts Survey Appraisal Questionnaire (attached) and return it to me via email by **September 17, 2007**.

Upon completion of the panel of experts’ review of this instrument and the reconciling of recommendations, the SFE will be piloted at The Ohio State University. I hope the
results of this pilot study will be valuable to the development of a SFE that can be used institutionally to assess faculty engagement motivators and deterrents or even nationally to advance this emerging field of research.

Thank you in advance for your assistance and cooperation. Provided below is my complete contact information. Feel free to call or email if you have further comments or questions about my research. Please also email me if you are unable to assist me with this project or if you would prefer I send you a hard copy of these documents and a self-addressed return envelope. I welcome any insights you may be able to provide based on your understanding of the literature.

Sincerely,

Amy Wade
131 Enarson Hall
154 W. 12th Ave
Columbus, OH 43210
Ph: 614.247.7024
Fax: 614.292.3240
wade.203@osu.edu
I. Definitions

1. Please assess the definitions of action-based research, service-learning, professional service and public service provided in questions 1, 2, 3 and 4 of the survey. (a) Is the phrasing clear and easy to understand? (b) Based on your knowledge of the field, please comment on the appropriateness of the definition provided.

<table>
<thead>
<tr>
<th>Term</th>
<th>(a) Phasing clear and easy to understand?</th>
<th>(b) Appropriateness of definition?</th>
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<tbody>
<tr>
<td>Action-Based Research</td>
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<td>Service Learning</td>
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<td>Professional Service</td>
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<td>Public Service</td>
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</table>
II. SFE Part II, III,

2. Please place the item number(s) of each statement in Part II, III, IV under the most appropriate factor below. NOTE: If it is unclear which factor a certain item corresponds to, there is a space below to indicate that as well.

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<tr>
<th>FACTOR</th>
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<td><strong>Personal Factors</strong></td>
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<td>Personal Values</td>
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<td>Family College Attainment</td>
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<td><strong>Professional Factors</strong></td>
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<td>Professional Association</td>
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<td>Current Department Support</td>
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<td><strong>Institutional Factors</strong></td>
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<td>Mission and Priorities</td>
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<td>Engagement Structure</td>
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<td>Faculty Involvement</td>
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<td>Community Involvement</td>
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3. Which, if any, item numbers did not seem to correspond with a factor identified in the table?
III. General Survey Appraisal Questions

4. Are the directions clear and easy to understand?

5. Is the phasing and terminology of the instrument clear?

6. How well do you think this instrument solicits the data relative to understanding faculty participation in engagement?

7. Additional comments and suggestions?
APPENDIX B

SURVEY MATERIALS
Survey of Faculty Engagement

Greetings!

Thank you for participating in the Survey of Faculty Engagement. This survey examines faculty participation in engagement activities. For the purposes of this study, engagement is defined as a commitment to collaborate with external constituents to address issues and advance knowledge that contribute to the public good. Community may be defined as local, regional, national or international depending on the work or expertise of individual faculty. The purpose of the survey is to more fully understand faculty participation in community engagement activities. The survey consists of four areas: engagement participation questions; epistemology/views on scholarship, questions related to personal interests and professional/ institutional factors; and, demographic and background questions. Your candid and honest response to each question or statement would be much appreciated. Participation is completely voluntary and responses will be kept confidential. All personal identifiers (email addresses) will be stripped from the data before the principal investigator or Co-PI receive the survey responses. Further, information obtained from this survey will be analyzed and reported collectively. The research protocol was determined exempt from IRB Review by the Office of Responsible Research in December, 2008, protocol number 2007E0834. The survey should take approximately ten minutes to complete. Once you begin the survey, you may discontinue at any point. Thank you for your participation. If you have questions or comments you may contact us at fsengage@osu.edu.

Amy Wade
Doctoral Candidate, School of Education Policy and Leadership

Ada Demb
Associate Professor, School of Education Policy and Leadership

I have read the introductory material and consent to continue to the Survey of Faculty Engagement.

- Yes
- No
Section I of IV: Engagement Participation Questions

6. Community-based research is scholarship that involves collaboration with community members to addresses community needs. Community research is applied research and may include student involvement.

   a. Based on this definition, over the past twelve months, have you participated in community-based research?
      □ Yes (answer 1b and 1c)*
      □ No (1c answer only)*
      □ Don’t know

   b. During the present term, how many hours per week on average do you spend on community-based research? _____________

   c. In the next twelve months, do you expect your participation in community-based research to:
      □ Increase
      □ Remain the same
      □ Decrease

7. Service-learning is a course-based educational experience where an organized service activity meets community needs while developing academically-based skills and knowledge.

   a. Based on this definition, over the past twelve months, have you participated in service-learning?
      □ Yes (answer 2b and 2c)
      □ No (2c answer only)
      □ Don’t know

   b. During the present term, how many hours per week on average do you spend on service-learning? _____________

   c. In the next twelve months, do you expect your participation in service-learning to:
      □ Increase
      □ Remain the same
      □ Decrease

8. Some forms of professional service can be described as outreach activities while others would be categorized as engagement.

   3a. Professional service may be categorized as outreach when a service based on disciplinary expertise is extended to the community (e.g., perform a needs assessment).

      a. Based on this definition, over the past twelve months, have you participated in outreach-oriented professional service activities?
         □ Yes (answer 3b and 3c)
         □ No (3c answer only)
         □ Don’t know

      b. During the present term, how many hours per week on average do you spend on this type of professional service? _____________

      c. In the next twelve months, do you expect your participation in this type of professional service to:
3b. Professional service may be categorized as engagement when a faculty member uses his/her disciplinary expertise to collaborate with the community and address or respond to societal needs, problems, issues, interests, or concerns.
   a. Based on this definition, over the past twelve months, have you participated in engagement-oriented professional service activities?
      □ Yes (answer 3b and 3c)
      □ No (3c answer only)
      □ Don’t know
   b. During the present term, how many hours per week on average do you spend on this type of professional service? _____________
   c. In the next twelve months, do you expect your participation in this type of professional service to:
      □ Increase
      □ Remain the same
      □ Decrease

9. Public service is defined as time and effort outside of your field/area of expertise dedicated to collaborating with community members or organizations to meet existing community needs.
   a. Based on this definition, over the past twelve months, have you participated in public service?
      □ Yes (answer 4b and 4c)
      □ No (4c answer only)
      □ Don’t know
   b. During the present term, how many hours per week on average do you spend on public service? _____________
   c. In the next twelve months, do you expect your participation in public service to:
      □ Increase
      □ Remain the same
      □ Decrease

Section II of IV: Epistemology/Views On Scholarship

Indicate the extent to which you agree or disagree with the following statements.

<table>
<thead>
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<th>Strongly Disagree</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

10. I place a high value on traditional forms of scholarship
11. I believe knowledge is obtained through unbiased scientific inquiry
12. I believe knowledge is constructed through experience
Section III of IV: Personal Interests and Professional/Institutional Factors

PROFESSIONAL MOTIVATION

13. Indicate the extent to which you agree or disagree with the following statements. In my professional pursuits, I am motivated by:

<table>
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</table>

a. Opportunities to improve the quality of life for others  
b. Opportunities to influence social values  
c. Enhancing student development  
d. Potential for career advancement  
e. Becoming an authority in my field  
f. The reward structure of my institution  
g. Gaining the respect of my peers

PERSONAL VALUES

14. Indicate the level of personal importance for the following statements:

<table>
<thead>
<tr>
<th>Not Important</th>
<th>Somewhat Important</th>
<th>Important</th>
<th>Very Important</th>
</tr>
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a. Opportunities to improve the quality of life for others  
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d. Potential for career advancement  
e. Becoming an authority in my field  
f. The reward structure of my institution  
g. Gaining the respect of my peers

PROFESSIONAL ASSOCIATION

15. What Professional Associations do you belong to (full name please)? ______________

16. Based on the definitions provided in the survey, indicate how important you believe the following engagement activities to be within your professional community.

<table>
<thead>
<tr>
<th>Not Important</th>
<th>Somewhat Important</th>
<th>Very Important</th>
<th>Essential</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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</table>

a. Community-based Research  
b. Service Learning  
c. Outreach or Engagement-oriented Professional Service  
d. Public Service
ACADEMIC DISCIPLINE

17. What is your discipline?_____________________

18. Indicate how important you believe the following engagement activities to be within your discipline.

<table>
<thead>
<tr>
<th></th>
<th>Not Important</th>
<th>Somewhat Important</th>
<th>Very Important</th>
<th>Essential</th>
</tr>
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<tbody>
<tr>
<td>a. Community-based Research</td>
<td>1</td>
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<td>3</td>
<td>4</td>
</tr>
<tr>
<td>b. Service Learning</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Outreach or Engagement-oriented Professional Service</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Public Service</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ACADEMIC DEPARTMENT

19. Indicate how important you believe the following engagement activities to be within your department.

<table>
<thead>
<tr>
<th></th>
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<th>Somewhat Important</th>
<th>Very Important</th>
<th>Essential</th>
</tr>
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<tbody>
<tr>
<td>a. Community-based Research</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>b. Service Learning</td>
<td></td>
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<td></td>
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<tr>
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<tr>
<td>d. Public Service</td>
<td></td>
<td></td>
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CURRENT UNIVERSITY SUPPORT FOR ENGAGEMENT

Indicate the extent to which you agree or disagree with the following statements about your university.

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<tr>
<th></th>
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<th>Agree Somewhat</th>
<th>Strongly Agree</th>
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</thead>
<tbody>
<tr>
<td>20. Engagement activities are part of the mission of the university</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>21. Engagement activities are among the top priorities of the university</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>22. University leadership supports engagement efforts</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>23. There is adequate financial support for engagement participation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. The current promotion and tenure system encourages faculty to participate in engagement activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. An infrastructure to support faculty participation in engagement exists on this campus</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26. Faculty here are strongly committed to engagement</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27. There is strong interest among the community to develop collaborations with the university</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28. Climbing the academic ladder is among the top priorities of the university</td>
<td></td>
<td></td>
<td></td>
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ENVIRONMENTAL FACTORS THAT MAY PROMOTE ENGAGEMENT

Indicate the extent to which you agree or disagree with the following statements about your university.

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29. A campus office where I could get support for this work existed
30. Engagement funding/grants were readily available
31. Such activities were given more weight in promotion and tenure decisions
32. Such activities were more highly valued within my discipline
33. Such activities were more highly valued within my professional community
34. Such activities were more highly valued within my department
35. Such activities were more highly valued by my university’s top administrators
36. It was easier to account for these activities in faculty evaluation documents

37. In your current position, do your responsibilities include the instruction of undergraduate courses?
   □ Yes
   □ No

38. From what type of institution did you receive your highest degree earned?
   □ Public Doctoral Institution
   □ Private Doctoral Institution
   □ Comprehensive Postbaccalaureate Institution
   □ Other

39. During your graduate training, how often did you interact with faculty who participated in:
   Never  Seldom  Sometimes  Often  Don’t Know
   1       2        3         4      5
   a. Community-based Research
   b. Service Learning
   c. Outreach or Engagement-oriented Professional Service
   d. Public Service

Section IV of IV: Demographics
40. Please indicate your sex.
   □ Male
   □ Female

41. Please indicate your race/ethnicity.
   □ White/Caucasian
   □ African American/Black
   □ Hispanic American
   □ Asian American/Asian, including Native Hawaiian/Pacific Islander
   □ American Indian/Alaska Native
42. Are you the first member of your immediate family to graduate from college?
   □ Yes
   □ No

43. What was your age on your last birthday?
   □ 39 or younger
   □ 40-50
   □ 51 and above

44. Please indicate the number of years you have been working as academic/in the professoriate.
   □ Less than 7 years
   □ 8-14 years
   □ 15 years or more

45. Please indicate the number of years you have been working at a public doctoral institution.
   □ Less than 7 years
   □ 8-14 years
   □ 15 years or more

46. What is your current academic rank? Select one.
   □ Full Professor
   □ Associate Professor
   □ Assistant Professor
   □ Adjunct Faculty Member
   □ Lecturer
   □ Other

47. What is your tenure status? Select one.
   □ Tenured
   □ On tenure track
   □ Not on tenure track

48. Please select the location of your primary academic appointment:
   Allied Medical
   Arts
   Arts and Sciences
   Biological Sciences
   Business
   Dental Hygiene
   Education and Human Ecology
   Engineering
   Environment and Natural Resources
   Food, Agriculture and Environmental Sciences
   Humanities
   Law
   Mathematical and Physical Sciences
   Medicine
   Nursing
   Pharmacy
49. Please use the space below to provide additional comments. Include your email address if you are willing to be contacted for potential follow-up efforts related to this study.

Please click on the FINISH button at the bottom of this page.