

ABSTRACT

RAGAN, NEAL S. Examining the Relationships between Higher Education Faculty's Personal, Professional, and Institutional Characteristics with Engagement Values and Practices. (Under the direction of Dr. Susan J. Barcina and Dr. Paul D. Umbach).

The last quarter of a century has brought a renewed focus to the service and engagement mission of higher education faculty in the United States. Previous research findings suggest factors that influence higher education faculty engagement may include personal and professional characteristics such as gender, race, academic rank, and disciplinary field (Antonio et al., 2000; Baez, 2000; Lunsford & Omae, 2011; O'Meara, 2002; Vogelgesang et al., 2010). On an institutional level, previous findings suggest factors may include missional alignment, leadership, and promotion and tenure processes (Chambers & Gopaul, 2010; Demb & Wade, 2012; Jaeger & Thornton, 2006; O'Meara, 2002; Sandmann & Plater, 2009). Even with this previous knowledge, many factors that influence engagement have yet to be learned; and what is known is often from studies of single institutions, limiting its generalizability. The relationships between the various factors and the interaction between individual and institutional influences is also not fully understood.

This study examined the relationships between higher education faculty members' personal characteristics, professional characteristics, and institutional factors, in relation to the faculty members' values and practices regarding faculty engagement. This research was guided by the Faculty Engagement Model, a conceptual model that includes three sets of factors postulated to impact faculty engagement: the personal dimension, the professional dimension, and the institutional dimension (Wade & Demb, 2009). This study examined a large, multi-institutional data set from the Faculty Engagement Survey administered by the Higher Education Research Institute. The analysis employed a two-level hierarchical linear

modeling (HLM) approach to understand faculty engagement values and practices. HLM results detected significant associations regarding gender and race on values and practices. Age was found to be a large positive influence on faculty engagement practice. Disciplinary influence as categorized by the Biglan classification scheme revealed significant variations in engagement values and practices. Perceived institutional priority on engagement also revealed a positive association upon faculty scores and provided insight into the impact of institutional level factors. The results of this study have key implications for institutional policies and practices to support engaged faculty.

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Examining the Relationships between Higher Education Faculty's Personal, Professional,
and Institutional Characteristics with Engagement Values and Practices

by
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DEDICATION

This dissertation is dedicated to my wife, Monica Ragan, and to our children, Rylee and Ezekiel. I could not have completed this journey without your love and support.

BIOGRAPHY

Neal Scott Ragan is a native of Garner, North Carolina. He earned Bachelor of Science degrees in Science Education and Environmental Engineering from North Carolina State University. Scott returned to graduate school at NC State to complete a Master of Education degree in Adult and Community College Education. Scott has spent the past twenty-two years of his professional career working at The Science House, the K-12 engagement arm of the College of Sciences at NC State University. Much of his current work is focused on providing high quality professional development opportunities for K-12 math and science teachers.

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CHAPTER ONE: INTRODUCTION

The American system of higher education is known as one of the most prestigious in the world. The 2017 Academic Ranking of World Universities listed 19 U.S. institutions in the top 25 (Academic Ranking of World Universities, 2017). While historically strong in the missions of teaching and research, the last quarter century has seen a growing emphasis on what is sometimes described as the third mission, that of university service and engagement. The focus on this third mission has been particularly emphasized in the U.S. since Ernest L. Boyer's 1990 publication, *Scholarship Reconsidered: Priorities of the Professoriate*, a landmark work that refocused the nation's attention on the meaning and importance of academic service and opened a new conversation regarding the scholarship of engagement and service to society.

The development of service and engagement within U.S. higher education institutions has taken a long and winding road. Its roots can be traced back for decades if not hundreds of years, though its significance and place within the hierarchy and mission of higher education has waxed and waned with changes in cultural emphasis. Since Boyer's seminal work was published, however, there is still much to learn and understand in regard to the engagement relationships and dynamics between faculty and the higher education institutions in which they serve. As American institutions struggle with the current issues of rising costs of higher education and the societal tension of education as a public versus private good, the importance of discussing all forms of scholarship, including the scholarship of engagement, has never been timelier.

Background & Significance

The following briefly describes the importance of this study in light of current literature and research. An understanding of how engagement is currently defined, some of its historical roots, and its current place in higher education are discussed.

Defining Engagement

What is meant by the term “engagement” in higher education? Is it thought of in the same way as service? Is it applied research? Is it outreach? How has the term engagement evolved and what meaning does it have for higher education in the 21st century? The vocabulary of engagement is diverse and includes terms such as: scholarship of application, scholarship of engagement, community engagement, outreach, civic engagement, engaged scholarship, and service learning. Boyer (1990) first spoke of the scholarship of application as a move toward connecting higher education to the community in which knowledge is applied to consequential problems in society. He desired for scholarship to engage issues that were both helpful to the individual and institution. Approximately five years after *Scholarship Reconsidered*, Boyer championed a new term to the scholarship lexicon that has persisted: engagement. In describing engagement, he noted, “The scholarship of engagement means connecting the rich resources of the university to our most pressing social, civic, and ethical problems, to our children, to our schools, to our teachers, and to our cities” (Boyer, 1996, p. 32). Boyer was focused on institutions working towards solving societal problems. Today the concept of engagement is becoming more deeply embedded and intertwined with the research and teaching functions of higher education. The common thread running through many of the new descriptions of engagement is building the connections between higher education missions and the needs of communities and societies. Engagement is used, “to

define a relationship with the community that is grounded in mutuality and respect, while acknowledging the complexities that exist in campus and community relationships" (Ward, 2003, p. 4). Engagement is not a one-way street from the university to the community in which service is delivered to the community; it is a two-way street in which the university and community work together. Weerts and Sandmann (2008) describe it as "a more collaborative model in which community partners play a significant role in creating and sharing knowledge to the mutual benefit of institutions and society" (p. 74). It is this new idea of engaged scholarship that guides the current debate, motivates the engaged scholar, and drives the need for research in faculty engagement.

History of Service and Engagement

Higher education of the 17th and 18th century had a significant service role; however, it was heavily influenced by the development of clergy and other Christian service within local communities (Ward, 2003). The beginning of the 19th century marked a shift in the service activities from largely religious aims to broader societal needs as "faculty and presidents were often called on to provide direction about societal affairs and were viewed as what we would think of today as public intellectuals" (p. 24). The mid-19th century revealed a significant shift in the types of service and community engagement being practiced, sparked by the infusion of large amounts of federal funds into the higher education system. Three important federal acts "created a public system connecting universities and citizens to build a stronger democratic society" (Fitzgerald, Bruns, Sonka, Furco, & Swanson, 2012, p. 9). The first of these was the Morrill Act of 1862, also known as the Land-Grant College Act; it provided new paths of access and birthed new academic institutions with a focus on the agricultural and mechanical arts. McDowell (2003) described its purpose as "the principle

that no part of human life and labor is beneath the notice of the university or without its proper dignity" (p. 33). In these schools, "teaching, research, and service missions were firmly rooted by the founding of land-grant universities, a model adopted by other sectors of higher education as well" (Ward, 2003, p. 25). This era of higher education also saw the rise of the research university in the United States. Additional federal actions assisted in connecting the traditional missions of teaching, research, and service, including the Hatch Act of 1887 and the Smith-Lever Act of 1914. The Hatch Act provided for new research sites and emphasized the importance of research in meeting society's needs, while the Smith-Lever Act provided an infrastructure for disseminating that knowledge with the public and those most affected. The Smith-Lever Act gave birth to what is considered one of the largest and most successful examples of local community engagement, the cooperative extension services that impact thousands across the country.

The mid-twentieth century saw massive growth in higher education and society's increased access to higher education through opportunities such as those provided by land-grant institutions. However, this era also brought a shift in focus at many institutions, as the value of research and teaching began to overshadow the service mission. The emphasis on research was fueled by several factors, including the start of the Cold War as well as the establishment of the National Science Foundation in 1952 (Simpson, 2000). Braskamp and Wergin (1998) summarized this-changing climate well:

But during this past half-century the research university has become a more inclusive professional organization, with peer-reviewed research productivity dominating its culture. Knowledge, solely or primarily for its own sake, has become a primary justification for faculty investment...Thus, the academy turned inward for its

character and sense of worth and being. Its separation from society has been conscious, deliberate, and defining. (p. 80)

Faculty were often caught in the crossfire, pressured on one side by the institution's focus on research and teaching, and on the other side by society's need for institutional involvement and collaboration. This tension was particularly salient for public institutions that received a great deal of financial support and funding from local and state communities. Though the land-grant movement helped to establish a place for service and engagement in higher education, it was often seen as the third wheel in a system primarily fueled by research and teaching functions. Outreach efforts were "seldom seen as contributing to the core mission of the university and are almost always devalued relative to teaching and research" (Bartel, Krasny, & Harrison, 2003, p. 90). There is still much to be learned in balancing the interests and motivations of both faculty and their institutions in the mission of engagement.

Role of Engagement Today

The end of the 20th century marked a time when a "quiet revolution...contributed serious thinking to the nature and purpose of higher education" (Ward, Buglione, Giles, & Saltmarsh, 2013, p. 288-289). Many academic leaders led this charge and discussion, including the aforementioned Ernest Boyer as well as Ernest Lynton, Eugene Rice, and Donald Schön. Boyer, one of the most cited engagement scholars, provided a fresh perspective on the mission of service and engagement in *Scholarship Reconsidered* (1990) that is still reshaping engagement in higher education today. It was written during a time when, "although the mission statements of colleges and universities continued to purport a commitment to social purposes, higher education's efforts to address current and important societal needs did not occupy a prominent or visible place in the academy" (Fitzgerald et al.,

2012, p. 10). At the time of Boyer's publication there was already much national conversation surrounding faculty reward systems (Moser, 2014). His work and others' provided a new lens and a model for what higher education should consider as appropriate scholarship, expanding beyond the traditional emphasis on research and teaching. The conversation served as a catalyst to rethink and redefine the service mission and its impact on faculty roles, particularly regarding what higher education defined as scholarship and the reward structures related to this type of service. Boyer (1990) said, "We proceed with the conviction that if the nation's higher learning institutions are to meet today's urgent academic and social mandates, their missions must be carefully redefined and the meaning of scholarship reconsidered" (p. 13). This charge pushed the academy towards a new understanding of what engagement looked like in higher education.

The language and understanding of engagement has continued to evolve since this debate was revived. The challenge for many institutions as well as society has been to bring clarity to the issues of service and engagement. The conversation began with the initial historical and land-grant missions and descriptions of service to the diverse language of today's institution that includes terms such as curricular engagement, outreach, partnerships, service learning, scholarship of engagement, and community engagement, among others. As described earlier, Boyer's (1996) initial description of the scholarship of engagement was more focused on solving "social, civic, and ethical" problems of society (p. 11). Some equated engagement terms with applied research that strove to solve practical problems while others chose to focus on getting higher education students involved in service learning. The language of engagement has proven to be as diverse as the types of activities that fall under the mission of service.

A significant development in recent years has been more of an emphasis on the scholarly characteristics of engagement and the integration of engaged activities with research and teaching. Another nuance of this conversation noted, “Engaged scholarship is about the doing of engagement, while the scholarship of engagement is about reflecting on and writing about it” (McNall, Reed, Brown, & Allen, 2009, p. 319). Michigan State University, much like many of the prominent land-grant institutions, has been one of the leading universities at the forefront of the engaged scholarship discussion in attempting to bring meaning to this complex activity. As early as 1993, just a few years after Boyer’s *Scholarship Reconsidered* was published, Michigan State developed its own comprehensive definition of engagement. They described “a form of scholarship that cuts across teaching, research, and service. It involves generating, transmitting, applying, and preserving knowledge for the direct benefit of external audiences in ways that are consistent with university and unit missions” (Provost’s Committee on University Outreach as cited by McNall et al., 2009, p. 318). The challenges to institutionalize community engagement in the identity and culture of many institutions still exist today, however, as evidenced by an assessment of the culture of engagement at Virginia Tech (Franz, Childers, & Sanderlin, 2012). One of the themes that emerged showed tensions still existed between academic and community work, noting, “It is clear that faculty and students who successfully engage with communities as academics focus on integration rather than separation of academic and community work” (p. 37). They described the cultural changes needed as “an evolutionary act rather than a revolutionary one” in order for engagement activities to gain equal footing with other university missions. Universities and engagement leaders continue to evolve in their thinking and attempts to come to a better understanding regarding the complexities of

university engagement and capture the essence of its diverse activities.

Jones and Lee (2017) recently reviewed the past decade of community engagement literature in the *Journal of Higher Education Outreach and Engagement* from 2006 to 2016, part of journal's 20th anniversary celebration. This review provided a snapshot of publication trends and the current state of community-campus engagement scholarship. Among their key findings was that the most frequently studied topics focused on service-learning, followed by institution and community partnerships, and finally topics regarding assessment, processes, and measurements. They also cited the lack of literature in areas such as finance, strategic planning, community voice, and faculty promotion and tenure. The field of engagement continues to evolve, but there is still a strong belief that "engagement scholarship is a cultural and social imperative for higher education in the 21st century" (Fitzgerald, Bruns, Sonka, Furco, & Swanson, 2016, p. 251). The importance of community engagement continues to increase, and it is critical that faculty and institutions position themselves to partner with society to solve problems, create new knowledge together, and engage in partnerships.

Purpose of the Study

The purpose of this study was to examine the relationships between higher education faculty members' personal characteristics, professional characteristics, and institutional factors, in relation to the faculty members' values and practices regarding faculty engagement. The reason it is critical to understand these relationships is to better support and facilitate the pressing call for higher education institutions and faculty to engage and partner with their communities. Boyer (1996) noted the dangers in higher education viewed as simply a private benefit and not a public good, a perspective still debated today. He said, "The campus is being viewed as a place where students get credentialed 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" (p. 19). In describing the status of the academy, McDowell (2003) noted, "The early twenty-first century is a time when research universities, particularly public research universities, are struggling to persuade the people of America of the unique utility of such institutions" (p. 36). Better understanding and support for faculty engaged in this public engagement work is critical for affirmation and funding.

Faculty members are the primary link between the university and community. Faculty are "at the center of higher education innovation in community engagement...because of their intimate ties to the academic mission (O'Meara, Sandmann, Saltmarsh, & Giles, 2011, p. 84). Understanding this critical area of faculty work and the characteristics of faculty and their institutions who do or do not engage will help higher education institutions better support and encourage scholarly engagement activities. Limited research exists that examines the primary engagement factors across multi-institutional sets of data. Most research examines the factors in isolation, and there are few integrated analyses of personal, professional, and institutional factors in a multilevel model. In addition, there is conflicting research in regard to disciplinary and departmental influences in higher education and limited research on the significance of institutional type and leadership.

The factors influencing faculty members' participation in community engagement are multifaceted. Understanding how these factors are intertwined in the activities of faculty is challenging, as "the complexity of faculty work and perceptions is evident in the pattern of impact of a number of variables" (Vogelgesang, Denson, & Jayakumar, 2010, p. 465). Research has shown race and gender are significant indicators, as females and minorities tend

to be more engaged (Antonio, Astin, & Cress, 2000; Demb & Wade, 2012; Lunsford & Omae, 2011; Vogelgesang et al., 2010). Professional characteristics including status or rank within the institution as well as the department or disciplinary field of the faculty member have been found to influence engagement activities as well (Antonio et al., 2000; Baez, 2000; Demb & Wade, 2012; O'Meara, 2002). On an institutional level, research suggests campus factors also influence faculty engagement practices and perceptions, including missional alignment, leadership, commitment, and promotion and tenure processes (Demb & Wade, 2012; Jaeger & Thornton, 2006; Vogelgesang et al., 2010). The work of higher education faculty and institutions is complex and diverse, and understanding how research, teaching, and service work together to influence faculty engagement practices is challenging.

Boyer's (1990) call to reconsider all levels of faculty scholarship in research, teaching, and service prompted a national reexamination of the value and issues regarding faculty and institutional engagement. The conversation eventually led to the Carnegie Foundation for the Advancement of Teaching (2016) adding a new elective classification for Community Engagement in 2005. As an educational leader in providing a framework for recognizing and describing institutional diversity in U.S. higher education, the special designation by the Carnegie Foundation served as a significant catalyst in the conversation. Institutions were prompted to assess engagement on their campuses, sharpen their missions and priorities regarding service and engagement, and develop structures to support this faculty work. It also generated the need for new educational research to better understand faculty and institutional behaviors in these areas. Now with over a decade having passed since the creation of Carnegie's new engagement classification, the research is still expanding and grappling to understand the nuances of this work. As already discussed, some

knowledge of the factors that influence faculty engagement practices has been gained in areas associated with personal, professional, and institutional domains. However, the usefulness of some of this data is limited and not generalizable as most data was collected at individual institutions and the integration of factors is not fully understood (Demb & Wade, 2012; Lunsford & Omae, 2011). A broader and more integrated understanding is needed to advance the field of engagement.

This study examined these relationships between higher education faculty members' characteristics, institutions, and practices regarding faculty engagement with more depth. A more expansive cross-institutional analysis of faculty engagement aids in understanding faculty engagement. Wade and Demb's (2009) original conceptual model was initially tested on only one institution, and a broader application and analysis are needed. A better understanding is needed regarding the interactions between the personal, professional, and institutional factors in a multilevel model. Recent research suggests that personal characteristics may not carry as much influence as disciplinary associations or institutional characteristics such as perceived institutional commitment (Demb & Wade, 2012; Vogelgesang et al., 2010). A multilevel model aids in assessing the strength of various associations.

While some trends are known regarding disciplinary influences in engagement practices, the research base in this area is limited and at times conflicting. A deeper analysis of departmental influences is needed. Demb and Wade (2012) note, "The results suggest strongly that institutional and organizational factors must be disaggregated to department and discipline level in order for their impacts to be fully understood" (p. 364). In addition, it would be valuable to know if differences exist across institutional types such as public,

private, Carnegie classifications, HBCUs, and other disaggregated categories. The data set used in this analysis, coming from a proven instrument used at numerous U.S. institutions, provides the kind of diverse information needed to examine these possible differences and contribute to the field of study.

In summary, while using the concepts of the Faculty Engagement Model as a guide, the research questions are applied to a large, diverse data set to see how the various factors and dimensions predict faculty engagement across a larger sample, with a particular emphasis on the understudied areas of discipline, institutional type, and institutional support. The models that are developed contribute to a fuller understanding of the personal, professional, and institutional factors that influence faculty members' engagement values and practices across a diversity of institutions. The findings inform higher education institutions' policies and practices regarding the faculty characteristics, environments, and university structures that best support faculty engagement.

Conceptual Framework

This research is guided by the conceptual model developed by Wade and Demb (2009) called the Faculty Engagement Model (FEM), a theoretical model that attempts to capture the multitude of complex factors that inform this work. The initial version of the FEM was developed based on a broad literature review of faculty participation in community-based research, service-learning, and other examples of professional service for the public. Though the authors noted the literature base was still relatively small, they developed a model that included three sets of factors postulated to impact faculty engagement: the personal dimension (i.e. race, gender, age), the professional dimension (i.e. discipline, status/rank), and the institutional dimension (i.e. institutional type, perceived

support). The FEM incorporates a broad definition of faculty engagement activities including community-based research, service learning, professional service, and civic service.

In subsequent research, the authors developed a survey based on the Faculty Engagement Model to analyze and test the model (Demb & Wade, 2012). The survey was administered to 436 faculty members at one “large urban Midwestern land-grant university” (p. 343). Based on the results, the authors revised the FEM to suggest a fourth set of factors called the communal dimension. The communal dimension included several factors that had previously been considered part of the professional dimension, including socialization, department support, and professional community support. The most recent analysis of the FEM noted, “The results of this study shift attention from personal characteristics toward the aggregate impact of professional, communal, and institutional factors” (p. 360). The FEM framework acknowledges the complex nature of faculty engagement practices and the challenge of understanding the multidimensional phenomena that contribute to this area of scholarship.

Research Questions and Hypotheses

In this research study, the personal, professional, and institutional factors were analyzed to identify and confirm their influence upon faculty engagement values and practices, albeit in a multi-institutional study as opposed to much of the previous research that reviewed individual institutions. Examining these factors using a large and diverse data set contributed to new understanding of the influences or lack thereof of some of the associations previously mentioned in the literature. Particular emphasis was placed on the understudied factors of discipline, institutional type, and institutional support to explain faculty involvement in engagement. The final research question addressed the integration of

several dimensions in a multilevel model that considered the influence of both individual and institutional factors. The following research questions guided this study:

1. What is the relationship between the personal faculty characteristics of gender, race, and age on the engagement values and practices of faculty members?
2. What is the relationship of the professional faculty characteristics of rank, tenure status, and departmental field on the engagement values and practices of faculty members?
3. What is the relationship of the institutional characteristics of institutional type and perceived institutional support of engagement on the engagement values and practices of faculty members?
4. What is the relationship of a faculty engagement model that includes personal, professional, and institutional factors on the engagement values and practices of faculty members?

Answers to these questions provide a clearer understanding of faculty members involved in engagement work and inform higher education leadership decisions of how to best support the critical mission of community engagement in American institutions.

Guiding Concepts and Terms

In order to examine what is known about faculty engagement practices and to guide this research, several key terms and concepts must be defined and more fully described. While the history of service and engagement in U.S. higher education is hundreds of years old, a more focused lens has spotlighted the movement in the last quarter century. An understanding of the current concepts and language forms the foundation of the research questions being studied.

Engagement

How do we define engagement? As described earlier, the mission of higher education in the United States has largely been guided by the three principles of teaching, research, and service. For many decades, the term ‘service’ dominated the conversation and is still part of the lexicon in many institutions. Service, however, is a term that could describe advising an on-campus student club, serving on a university committee or task force, or other activities with a more inward institutional focus. While these tasks are important service to the university, they are not the primary types of engagement considered here as they involve little relationship with the community outside the institution. For many years this limited idea of ‘service’ distracted institutions from focusing on the value and potential of engagement scholarship opportunities within faculty-community partnerships. Holland (1999) noted, “Across higher education, we lack a common understanding of the language of public service. A confusing myriad of terms has arisen, and the rhetoric of public service is not clear to everyone” (p. 39). To move the conversation forward, a more comprehensive description of engagement is needed. Further complicating the understanding is Boyer’s idea of the “scholarship” of engagement. Adding that descriptor to the term broadens the meaning, particularly for the academy. The types of inwardly focused university service described before are not considered scholarly endeavors. In describing the new kind of university that values the engaged scholar, Cox (2006) portrayed it as such:

In sum, the scholarship of engagement, therefore, is a set of activities. At its core are four dimensions of scholarship – discovery, integration, application, and teaching. It becomes the scholarship of engagement through its active and interactive connection with people and places outside of the university. (p. 125)

An understanding of engagement that captures the breadth and integration of scholarship is what Boyer was attempting to describe in the 1990s and is still needed today.

Scholars have struggled with the best language to frame the work that falls under the scholarship of application. In recent decades, the mission of service has largely evolved into a broader concept better described as “engagement.” In recent years the term engagement has risen above service as a better way to describe the kinds of external activities in which faculty leave the ivory tower to connect and partner with those in the community. But what is meant by engagement today? It, too, can be broadly defined. Higher education continues to work towards a consensus definition of engagement. As recently as 2016, Sandmann, Furco, and Adams (2016) conducted a Delphi survey examining the most influential and seminal articles for the 20th anniversary of the *Journal of Higher Education Outreach and Engagement*. One of their conclusions noted, “Greater clarity of definition across the nuanced engagement-focused terms is needed” (p. 12). The terminology used to describe engagement includes public scholarship, public engagement, community partnerships, civic engagement, outreach, community engagement, and service learning among others. The *Handbook of Engaged Scholarship* (2010) dedicated an entire chapter on the challenges of “Defining the ‘Engagement’ in the Scholarship of Engagement” (Ward & Moore, 2010). Yet even this attempt does not really reach a consensus definition, but serves as a review of the origins, current state of affairs, and future issues to be considered. Ward and Moore (2010) concluded, “Faculty, students, and institutions, however, need to move beyond the rhetoric and into the action of engaging more fully with communities and carrying out engagement initiatives” (p. 50). The key takeaway is that institutions and leaders recognize the need to discuss engagement and work through the language in order to practice engagement with

external stakeholders. The most widely referenced definition is what is offered by the Carnegie Foundation (2016) and will be used to frame this review: “Community Engagement describes the collaboration between institutions of higher education and their larger communities (local, regional/state, national, global) for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity.” This review examines faculty engagement practices in light of Carnegie’s definition as activities that contribute to both academic scholarship and to the public good.

Faculty Types

As universities have grappled with the service and scholarship of engagement, they have also examined the ‘who’ of the institutional members who conduct engagement activities. Many institutions have created centers or offices that concentrate on community engagement as their primary focus. There are many staff members in these offices contributing to this work who are not considered faculty and do not have primary teaching or research duties. These support staff are critical and can often serve as the bridge or boundary spanners between the faculty and the community; however, they are not the focus of this study. This research examines the institutional faculty who are directly involved in scholarly engagement.

Therefore, the next guiding term described here is who are considered faculty in this study. What is meant by ‘faculty’ in this research, a term which can be broadly interpreted within U.S. institutions to describe any instructor involved in post K-12 education? For the purpose of this study, faculty are defined as full-time college and university members holding tenured, tenure-track, or non-tenure track academic appointments at four-year colleges and universities. Faculty members are considered to be those who spend at least part of their time

teaching undergraduates or graduate students and may have other research-focused duties.

Part-time faculty are not considered part of this review, nor are faculty members at community colleges or other institutions that do not grant four-year undergraduate degrees.

That does not mean part-time or community college faculty are not involved in genuine engagement practices—they most certainly can be and are. The same can be said of the engagement staff or boundary spanners mentioned earlier who are not in faculty positions.

However, in order to focus this research study, faculty are defined as described above.

Tenure Status

One of the guiding dimensions of the faculty engagement model focuses on the professional characteristics of faculty members. One of those elements is described as status or rank. An element in this professional dimension is the tenure status of the faculty member. Tenure is defined by the American Association of University Professors as “an arrangement whereby faculty members, after successful completion of a period of probationary service, can be dismissed only for adequate cause or other possible circumstances and only after a hearing before a faculty committee” (AAUP, 2016). The academic freedom that tenure provides may have an important influence on a faculty member’s ability or desire to participate in engagement activities. As described before, this study examines full-time faculty who may hold tenured, tenure-track, or non-tenured academic appointments. Based on the data that is being collected from the Higher Education Research Institute (HERI) at the University of California, Los Angeles, the tenure status is examined using these four categories: tenured faculty members; members on a tenure track, but not yet tenured; members not on a tenure track, but the institution has a tenure system; and, finally, members who are not tenured and their institution does not have a tenure system.

Department/Discipline

As described in the previous research questions, departmental field is considered one of the professional factors in the Faculty Engagement Model. Previous research has indicated it may be an influencing factor on faculty engagement practices, though the findings have been a bit mixed and the research limited. The department or discipline that a person is a member of could theoretically be considered both a professional characteristic and an institutional level characteristic. Departments or disciplines often have distinct cultural or social mores in regard to teaching, research, service, tenure and engagement that operate despite a faculty member's personal preferences. However, the choice of a department or discipline can also be seen as a professional characteristic, as individual faculty make professional choices about which disciplines to pursue in teaching and research as well the departments in which they choose to work. In being consistent with the Faculty Engagement Model, department/discipline is considered a professional characteristic and operates on the level of the individual. The HERI data aggregates the departmental disciplines into following categories: agricultural or forestry, biological sciences, business, education, engineering, English, health-related, history or political science, humanities, fine arts, mathematics or statistics, physical sciences, social sciences, other technical disciplines, and other non-technical disciplines.

Institutional Type

The faculty engagement model attempts to explain faculty engagement practices based on characteristics of both the individual faculty member and the higher education institution of which they are a part. These characteristics operate on separate but intimately connected levels. This multilevel approach adds a level of complexity that is described later

with the analytical methods. However, at the institutional level, it is important to define and understand the institutional types, which may also influence faculty engagement practices. The HERI data includes a set of institutional categories that are explored in this study: public or private universities; historically black colleges or universities; the Carnegie classifications of doctoral/research universities, master's colleges and universities; baccalaureate colleges; as well as theological seminaries and Bible colleges.

Definition of Terms

In summary, the following definitions guide the key concepts and discussions throughout this research project.

Engagement: Unless otherwise noted, this study points to the Carnegie Foundation definition in regard to the meaning of faculty engagement. “Community Engagement describes the collaboration between institutions of higher education and their larger communities (local, regional/state, national, global) for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity.” Throughout this project engagement is discussed in terms of a reciprocal relationship between higher education faculty and institutions, and the community or constituents they serve.

Service: As noted earlier, some institutions use the term ‘service’ in describing faculty work that may be focused inwardly on institutional or student needs alone. Examples of this type of service may include student advising and tenure committees. While this work is important and a critical part of faculty life, it is not the kind of service or work this research examined, as it does not include external or collaborative partnerships outside of the campus. In the context of this research, when the term service is used it is assumed to be externally focused unless otherwise noted. An appropriate example of externally focused

service may include service learning, which Bringle and Hatcher (2002) defined 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 the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of personal values and civic responsibility (p. 38).

Faculty: Unless otherwise noted, the term ‘faculty’ in this study refers to full-time college or university members who spend at least part of their time teaching undergraduate or graduate students. This definition of faculty delimits the data used in the analysis. Faculty members may include tenured, tenure-track, or non-tenure track positions, including lecturers or instructors. Neither part-time nor adjunct faculty are considered in this discussion, though it is noted they can be involved in authentic engagement work.

Summary

Over a quarter of a century has passed since Boyer’s *Scholarship Reconsidered* was published, and other engagement scholars such as Schön, Lynton, and Rice revived this topic of conversation. Though the wheels of change often turn slow within higher education reform, significant progress has been made in regard to the role engagement plays in higher education. As previous history has revealed, the three-legged stool of research, teaching, and service has been in place for quite a while within U.S. universities and colleges. Though, as some have noted, until recently, “the service function of faculty has been referred to as the short leg of the three-legged stool” (Ward, 2003, p. 127). It may be premature to say the service and engagement mission has reached equal footing with research and teaching on many campuses but given the prevalence of the conversation in higher education literature

and the spotlight shown by organizations such as the Carnegie Foundation, the topic is gaining prominence and a stronger foothold.

Some of this pressure has been applied by a growing demand from society and the community for mutual partnerships and reciprocity with the university, particularly for institutions that rely heavily on local public support. The financial challenges of the 21st century have created significant pressures on higher education in the United States, from rising tuitions and greater student debt to decreases in services. These economic hardships are generating pressure on university faculty and staff to do more with less. These pressures have been particularly great on public universities who have had to justify their use of dwindling public funds. Politicians and societies alike have focused the spotlight on how these institutions are serving the local citizens and giving back to society. Just as significant as the financial pressures, however, is a growing recognition by the academy that its service and scholarship should be more closely linked to society, regardless of other influences. If the institutional roots are in research, teaching, and service, society is demanding more and more to see how the fruits of the university mission impact and contribute to the local community.

The third mission of service and engagement has an opportunity to rise to today's challenges and demonstrate how civic engagement can play "a broader and more visible role in the education, social, and economic well-being of local communities and the nation" (Jongbloed, Enders, & Salerno, 2008, p. 313). The university needs to continue to focus on the potential for partnerships and relationships that are mutually beneficial to the academy and the community. Describing service and engagement as the third mission of higher education does it a disservice, implying a designation that ranks it beneath the missions of

research and teaching in the hierarchy of higher education. The discussions of recent years, however, are beginning to break down this way of thinking and replace it with an integrated view of scholarship. Fear and Sandmann (2016) call for higher education to use outreach-engagement as a transformative force to serve society and serve it better. As the demands from outside the academy increase, institutions need to be less defensive and business-minded and acknowledge that “outreach and engagement is higher education’s best chance for change that fundamentally serves the public good” (p. 123). Institutions are recognizing a modern characteristic of the engagement mission is that it often overlaps with the goals of research and teaching, making it challenging to analyze and evaluate in a vacuum. Jongbloed et al. (2008) noted, “This makes community engagement and third mission difficult to separate from traditional teaching and research activity—they cannot be put in a separate box” (p. 313). This overlap between the missions should be viewed as a strength when put into the proper perspective. It reveals the power of engagement as a unifying thread between all three of the primary missions of higher education. Engagement can link the goals of research, teaching, and service in a way that is difficult to achieve when the missions are viewed in isolation. This study advances the work of higher education with an examination of the characteristics of engaged faculty and their institutions.

CHAPTER TWO: REVIEW OF LITERATURE

Introduction

In this chapter, the research and theoretical literature are discussed to examine what is already known in regard to faculty engagement values and practices. First, the historical precursors of the engagement work are explored and discussed more deeply, including a close examination of the work of leading engagement scholars, the Kellogg Commission, the Carnegie Foundation, and other organizations and catalysts that moved the topic forward in American institutions. The critical role of higher education faculty in the engagement movement are discussed in detail. The Faculty Engagement Model (FEM), developed by Wade and Demb (2009), is reviewed and the three dimensions the model believes influence engagement practices are outlined. Finally, an in-depth review of the current research literature regarding engagement is explored with an emphasis on faculty roles, personal characteristics, professional characteristics, barriers and motivational factors, and the institutional factors which support or hinder engagement practices.

Some of the literature has reviewed the type of faculty members drawn to engagement, as well as those who, for various reasons, rarely engage with the community in any meaningful way. It should be noted faculty practices are often a product of their environment, meaning their activities are strongly influenced by the mission and culture of the institution and, on a more intimate level, the department's priorities. There has been some research in areas such as faculty demographics, the impact of professional characteristics on faculty engagement, the factors that motivate faculty to engage, some of the barriers that inhibit engagement, as well as the types of activities in which faculty members choose to engage. The key literature in those areas are shared. In addition, some knowledge has been

gained regarding institutional policies and the role of leadership in the engagement movement. These characteristics and practices shed light on the institutional factors that influence community engagement and help inform university policies and practices that may support future engagement.

A Renewed Call for Engaged Scholarship

The last quarter of a century has seen a renewed focus on the role of civic engagement in higher education and produced a revival of sorts in the discussion. As described earlier, leading scholars such as Ernest Boyer, Ernest Lynton, Eugene Rice, and Donald Schön, all of who were connected to the Carnegie Foundation for the Advancement of Teaching, helped bring a renewed focus on the public purpose of higher education (Ward et al., 2013). Though Boyer's work tends to be one of the most cited in the literature, many scholars helped lead the way. Ernest Lynton's work, particularly *New Priorities for the University: Meeting Society's Need for Applied Knowledge and Competent Individuals* (Lynton & Elman, 1987), was a critical early step. A physicist, Lynton was in a unique position as a member of the hard sciences to criticize what was described as the "tyranny" of research and to advocate for changes in organizational policies and practices (Saltmarsh, 2016). Lynton "made the connection between individual rewards and faculty engagement with social issues," and advocated for changes to reward structures to recognize and reward this work (p. 289). In describing the research university of the late 20th century, he warned against the "linear view of knowledge" that created a hierarchy of values with research at the top (p. 9). He understood that "knowledge moves through this system in many directions," and that "wherever knowledge emerges, scholarship can exist" (pp. 10-11). In order to promote this emerging view of scholarship, Lynton advocated for changes to evaluation

criteria and documentation. Lynton, along with Amy Driscoll, published *Making Outreach Visible: A Guide to Documenting Professional Service and Outreach* (1999), an important document that suggested new documentation examples and guided questions and issues for campus exploration.

Eugene Rice, who is credited with influencing Boyer's *Scholarship Reconsidered*, helped "call into question the university-centric, highly rationalized expert knowledge of the academy being applied to the external community" (Ward et al., 2013, p. 289). Writing for the *Campus Compact*, Rice (2003) noted, "Since 1850, major turning points have come about every 50 years—every two generations—and what is striking about these changes is that at each point the dominant meanings of both scholarship and engagement have been challenged" (p. 2). From the formation of the land-grant movement, to the German style disciplined based research at the beginning of the 20th century, to World War II and the beginning of the Cold War, to the turn of the 21st century, the nature of scholarship and civic engagement in higher education has seen renewed debates. In describing the most recent shift, Rice said, "What we have is a rare window of opportunity to shape a new generation of faculty and chose the kind of scholarship and engagement that would be preferable and beneficial" (p. 4). He argued for faculty to move beyond simple outreach and "go beyond service with its overtones of noblesse oblige" and instead engage in "genuine collaboration" (p. 7). Rice advocated for a more collaborative model between researcher and practitioner that emphasized partnership and reciprocity.

Donald Schön was another scholar who played a key role in pushing higher education to think differently. In describing the work of Schön, it was noted, "Donald Schön challenged the dominant epistemological norms and values of the academy and highlighted the need for

change in the organizational culture of the academy toward a reconceptualization of what counts as legitimate knowledge" (Ward et al., 2013, pp. 289-290). Schön (1995) described the work of outreach and engagement scholars as occurring in "the swampy lowlands" as opposed to the "high, hard ground" of problems that lend themselves to technical solutions (p. 28). He advocated for new kinds of reflective action research that challenged the predominant methods and organization structure of the modern research university. Rice (2003) said, "Schön, more persuasively than anyone else, argued that theory and research on the one hand and practice on the other hand had to be realigned—that theory and practice are hierarchically related and should not be" (p. 8). Leading voices such as Schön, Lynton, and Rice helped set the stage for a national discussion on engagement and scholarship.

Scholarship Reconsidered by Earnest Boyer (1990) was a landmark piece of work in American higher education and largely considered one of most influential pieces of engagement literature. Glassick (2000) noted the book "clearly had struck a nerve in higher education" (p. 877). Its impact still ripples through the academy today. Since 1997 the work has sold more than 35,000 copies and has been cited over 6,600 times (Moser & Ream, 2015). Over twenty-eight years later it is a work that still exerts a strong influence on the engagement discussion. Boyer (1990) described faculty as a "mosaic of talent" in his effort to promote all forms of scholarship (p. 27). His work came during a time when the institutional climate was heavily focused on research and teaching as the primary missions upon which faculty were evaluated. Boyer (1990) recognized, "Colleges and universities that flourish help faculty build on their strengths and sustain their own creative energies" (p. 43). Though service still remained part of the language of most institutional mission statements at that time, engagement work was overshadowed and pushed to the margins by the dominance of

the research institution. Faculty engagement practices were hindered until scholars such as Boyer and others elevated the discussion of this somewhat overlooked form of scholarship and revived the topic of service and engagement. Boyer “challenged the reward structures and what he viewed as a narrow perception of scholarship” (Moser & Ream, 2015, p. 22). *Scholarship Reconsidered* played a vital role in this discussion.

The last two decades have seen considerable progress in the engagement movement in large part due to scholars such as Boyer, Lynton, Rice, and Schön, all of whom challenged institutions to rethink how knowledge was developed. The dominance of the research institution during which they wrote was a time when “basic research has come to be viewed as the first and most essential form of scholarly activity, with other functions flowing from it” (Boyer, 1990, p. 15). Boyer envisioned a more integrated system and categorized scholarship in four distinct yet overlapping areas: discovery (research), integration (synthesis), teaching, and application (service). His desire was for the areas of teaching, service, and integration to hold equal footing with research. He was not trying to reinvent the entire higher education system, but rather was “calling attention to or enhancing the nature of faculty work that was already taking place, as opposed to displacing or overturning the traditional core of research, teaching, and service” (Cruz, Ellern, Ford, Moss, & White, 2013, p. 3). Boyer’s work sparked a new conversation and a shift in perspective that has brought about significant changes in the way institutions view faculty service and engagement.

The scholarship of discovery was how Boyer described traditional research and the academy’s search for new knowledge. Boyer (1990) recognized discovery was at “the heart of academic life” and “must be assiduously cultivated and defended” (p. 18). His scholarship of integration was closely related to discovery and sought to bring perspective to the research

work and make connections across disciplines and contexts. Boyer stated integration “seeks to interpret, draw together, and bring new insight to bear on original research” and answer the question, “What do findings mean?” (p. 19). Boyer noted teaching was viewed as a routine function of the professoriate to most educators, particularly to those whose primary focus was research. However, he recognized teaching was far from mundane and more critical than some considered: “Inspired teaching keeps the flame of scholarship alive...without the teaching function, the continuity of knowledge will be broken and the store of human knowledge dangerously diminished” (p. 24). The scholarship of teaching, when done at a high level, involves not only the transmission of knowledge, but transforming and extending it to others.

The scholarship of application is the area of focus most related to the current conversation of engagement. Boyer described this area of scholarship as more than the commonplace examples of service such as being on institutional committees, advising student clubs, or even more community-related activities such as serving on town councils or working with local youth clubs. In describing those cases, he noted, “But all too frequently, service means not doing scholarship but doing good” (p. 22). The scholarship of application he promoted was encouraged to be directly tied to the faculty member’s field of knowledge and required rigorous work and professional activity. He also noted it was not a one-way street and that “new intellectual understandings can arise out of the very act of application” (p. 23). In other words, the application of knowledge can lead to the building and creation of new knowledge through collaborative processes which benefit both the community and institution.

The most valuable contribution of Boyer's seminal work may not be his emphasis on the scholarship of application, though that conversation was very much needed at that time. Instead, the most critical aspect of his work was a philosophical model that explained how all four categories interact and work together. It was out of this interaction the scholarship of engagement as it is widely known today evolved to emphasize the dynamic relationships between research, teaching, and service. Ward (2003) said, "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 that all work can be categorized as the scholarship of engagement" (p. 12). This provided a more inclusive view of all areas of faculty work and sparked a new discourse regarding scholarship in all its forms, and its impact upon the individual faculty member, the institution, and society at large.

Scholarship Reconsidered transcended the traditional views of scholarship at a time when the 'publish-or-perish' mantra had a strong grip on faculty in higher education. Despite the large waves it created at its publication, the book "arguably generated more discussion than concrete action" (Moser, 2014, p. 351). In some ways Boyer's ideas on engagement, Schön's epistemological challenges, Lynton's views on the tyranny of research, and Rice's call for reciprocity were perhaps ahead of their time. In today's faculty climate, however, the issues they raised are still very relevant to institutional priorities and the challenges of understanding the full scope of faculty work. Many faculty still face the pressures of 'publish or perish' as research and teaching loads are often weighted more heavily than service and engagement activities in tenure and evaluation policies. As Moser (2014) noted, "Boyer provided a framework through which the nation can have a constructive dialogue surrounding the purposes of higher education" (p. 352). The same could be said of scholars

such as Lynton, Rice, and Schön, all who challenged the dominant thinking of higher education at that time.

Responding to the Engagement Focus

Scholarship Reconsidered became a Carnegie Foundation bestseller (Moser, 2014). Moser (2014) observed, “The response was mixed and passionate, and revealed that Boyer provided a vocabulary for a national debate on scholarship” (p. 349). The book and other key engagement literature of that era set the stage for much discussion regarding the scholarship of engagement. This discussion converged at a point in time when higher education was under fire in other ways from society. There was a sense that “the quality of undergraduate teaching in the United States is in decline—or—if it is not getting any worse, it is already bad enough to justify public concerns” (Winston, 1994, p. 9). Others noted, “Higher education has been under attack for failing to produce graduates with skills in the workplace and for active participation in a democratic society” (DeZure, 2000, p. xxii). These concerns helped create a space in which the ideas of service learning, volunteerism, and civic and community engagement could be more openly discussed (Hollander & Meeropol, 2006). The following section summarizes some of the key organizational responses of that time and the literature that bring us to the current climate of faculty engagement in higher education today.

Scholarship Assessed

Many in higher education were intrigued by Boyer’s four domains of scholarship: discovery, integration, teaching, and application. One of the key topics and tensions of Boyer’s work was how the quality of all these areas of scholarship could be assessed. Moser (2014) asked, “How does one assess such different scholarly activity and maintain any sort of standard?” One of the more significant responses was conducted by researchers at the

Carnegie Foundation entitled *Scholarship Assessed: Evaluation of the Professoriate*, by Glassick, Huber, and Maeroff (1997). Following in the footsteps of Boyer, the authors examined the changing view of scholarship in higher education and proposed new qualitative standards for faculty assessment and evaluation. They identified six standards for assessing faculty performance: clear goals, adequate preparation, appropriate methods, significant results, effective presentation, and reflective critique. One of the main purposes of these standards was “in effect creating a platform for legitimating a scholarship of community engagement” (Berberet, 2002, p. 93). The authors provided a much-needed structure to show these types of assessments were possible. *Scholarship Assessed* noted the standards were developed “to give the four kinds of scholarly activities the weight that each deserves” and aid in the recognition and evaluation of these scholarly acts (Glassick et al., 1997, p. 22). This work revealed the power in Boyer’s original publication and the new standards proposed built on his work and definition of scholarship. Ward (2003) said, “Their standards, and others developed from them, can be used to evaluate engagement and its scholarly attributes” (p. 110). Despite the assessment challenges, the task was no longer an excuse for not recognizing scholarly engagement work. Frameworks such as those in *Scholarship Assessed* advanced the review of faculty scholarship across all three areas of research, teaching, and service and moved the engagement conversation forward.

Kellogg Commission

The Kellogg Commission on the Future of State and Land-Grant Universities played an instrumental role in advocating for a more engaged academy. The Commission existed between 1996 and 2000 and consisted of the presidents and chancellors of 25 major public institutions (Byrne, 2006). Over those five years, they released several important

publications, including the well-known *Returning to Our Roots* series of reports, including one report specifically focused on engagement entitled *Returning to Our Roots: The Engaged Institution* (Kellogg Commission, 1999). Due to the high profile of the institutions and leaders who served on the Commission, the work resonated throughout the nation and stimulated both discussion and changes. The simple idea that institutions needed to “return to our roots” was considered “harsh language about the current state of public affairs” (McDowell, 2001, p. 11). However, it was a message that needed to be heard in order for institutions to shift the focus from research and teaching alone and to remind the academy about the mission of service and its importance to society. *Returning to Our Roots* (Kellogg Commission, 1999) defined the problem and challenge as such:

In the end, what the bill of particulars adds up to is a perception that, despite the resources and expertise available on our campuses, our institutions are not well organized to bring them to bear on local problems in a coherent way. (p. 9)

The Kellogg Commission spurred institutions to reconsider what scholarly engagement looked like on their campuses and its place within the mission of higher education institutions.

One of the ways the Commission advanced the conversation was to contribute to a clearer definition of what engagement means. They stated, “By engagement, we refer to institutions that have redesigned their teaching, research, and extension and service functions to become even more sympathetically and productively involved with their communities, however community may be defined” (Kellogg Commission, 2001, p. 13). A critical element the Commission pushed was the idea of community involvement and collaboration that emphasized that engagement was a mutual relationship between the two, much like the ideas

of reciprocity advocated by Eugene Rice. The prevalent cultural attitude was largely one of the ivory tower reaching down to help the public and community, an idea Ward (2003) described as “a one-way street from the university to society” (p. 26). However, real engagement was not unidirectional, but was a relationship in which all partners worked, learned, and solved problems together. The *Returning to Our Roots* reports were “challenging higher education to become more engaged with communities through collaborative partnerships rather than as experts with pre-conceived solutions to complex problems” (Fitzgerald et al., 2012, p. 11). Civic engagement and new collaborations were taking deeper roots in higher education due to conversations such as these.

In its final summary, The Kellogg Commission (2001) provided seven guiding characteristics to define an engaged university. These characteristics were provided to help institutions and administrators recognize engagement work on campuses and were described as a seven-part test of engagement. The elements of the test included the following: responsiveness (to the community), respect for partners (encouraging joint work), academic neutrality (mediating contentious issues), accessibility (making expertise available to all), integration (interdisciplinary work that joins the missions of teaching, research, and service), coordination (across all areas of the campus and community), and resource partnerships (joint funding with the community). One of the final recommendations was to have “each institution develop an engagement plan measured against the seven-part template” (Kellogg Commission, 2001, p. 17). It was believed this template would provide focus and leadership for new engagement practices and policies.

Many institutions took up the challenges of the Kellogg Commission from the start. One of the leading examples was Penn State University, not surprising given that former

President Graham Spanier was the chair of the commission. This prominent land-grant institution was a representative of those institutions that realized the need to rethink engagement scholarship and its place in the academy. Penn State took up the charge in recognizing “scholarship must be redefined more broadly to adequately address the needs of the public, and criteria and methods of evaluation must be redefined to recognize and reward all forms of scholarship equitably” (Hyman et al., 2000, p. x). With that impetus, they drafted *UniSCOPE 2000: A Multidimensional Model of Scholarship for the 21st Century* (2000). UniSCOPE synthesized the three forms of scholarship (research, teaching, service) with Boyer’s four functions (discovery, integration, application, and education). The report served as a roadmap for other institutions and as “a framework on which the disciplines and professions, departments, colleges, and campuses can find common ground and develop appropriate criteria” (p. 40). The model and its continuum of scholarship was illustrative of what other institutions were beginning to do in order to recognize and reward all forms of scholarship as Boyer had discussed.

Land-Grant Universities

As described earlier in discussing the history of service and engagement in higher education, land-grant institutions have played an important role. Ever since the Morrill Land-Grant Act of 1862, these institutions have been rooted not only in the missions of teaching and research, but also in service to the community. Ward and Moore (2010) noted that the Morrill Act “created the foundations for engagement in the research university” (p. 40). The Act provided 17.43 million acres of land for these new public institutions. At the beginning of the 21st century there were 51 institutions established by the original act, one in each state as well as Puerto Rico. A second Morrill Act in 1890 established 17 new land-grant

institutions that were traditionally black or African American institutions. In the century since the second Morrill Act, another 34 institutions were created, most of them community colleges for Native Americans or institutions in other U.S. territories around the world (McDowell, 2001).

The Morrill Act challenged the dominant views of higher education at the time. McDowell (2001) noted, “Prior to the 1862 land-grant institutions, higher education was reserved for, and helped preserve, the aristocracy of the society” (p. 4). In addition, the Morrill Act challenged the very nature of academic work, with one aspect of its revolutionary character noting, “Its agenda of scholarship considered no subject beneath its purview” (McDowell, 2003, p. 35). Land-grant institutions understood the revival of engagement Boyer sparked, as well as the need to respond to the challenges. In fact, Boyer “targeted land-grant institutions in particular because the land-grant idea intimately embraced knowledge application and service to society” (Bruns, Fitzgerald, Furco, Sonka & Swanson, 2011). The Kellogg Presidents’ Commission described earlier was first convened in 1996 by the National Association of State Universities and Land-Grant Colleges (NASULGC). C. Peter Magrath, former president of the NASULGC, commented on the Kellogg Commission’s *Returning to Our Roots* report:

Our universities, and therefore our society, face a crisis. Public universities must be financially stable and enjoy public confidence in order to perform their unique and vital mission as the intellectual and educational service centers for America in the 21st century. But to earn this support they must examine themselves, aided by friendly but not uncritical outside counsel – and then change and reform wherever needed to better serve society. (McDowell, 2001, p. 12)

That kind of language called for some difficult introspection and changes for higher education. The traditional services of agricultural and cooperative extension alone were not sufficient to serve a rapidly changing society. McDowell (2003) warned against the perspective of the land-grant principle as being “explicitly agricultural” and that it “continues to mislead and confound” the future of the academy. When the Morrill Act was established, approximately 60 percent of the nation was engaged in agriculture, while today that number is less than two percent (McDowell, 2003). Those programs often focused on technical assistance or a “one-way transfer of information from the university to the ignorant masses” (McDowell, 2001, p. 171). Instead, land-grants needed to focus on a process that Merrill Ewert, director of Cooperative Extension at Cornell University, called transformational education and learning that drives community-based collaborations and research (cited in McDowell, 2001, p. 171). As institutions struggled with this transition, McDowell noted, “The original mission is being renegotiated in some places and abandoned in others” (p. 13). These universities were striving to meet the demands and expectations of community engagement in new ways.

Land-grants institutions continue to lead the engagement charge in many ways. In 2009 the NASULGC became the Association of Public and Land-Grant Universities (APLU). The APLU includes a membership of 237 public research universities, land-grant institutions, state university systems, and affiliated organizations (APLU, 2018). That membership includes 74 land-grant institutions as well as 23 HBCUs. They are a leader in the arena of higher education service and engagement. One of the working projects of the APLU is the current Economic Development and Community Engagement initiative, which continues to play a strong leadership role in conversations regarding community service and

engagement. The APLU has also established the New Engagement Task Force that challenges institutions to “rethink their structure, epistemology, and pedagogy; integration of teaching, research, and service missions; and reward systems” (Fitzgerald et al., 2012, p. 10). Initiatives such as these are critical to the institutionalization of engagement in higher education.

The APLU recently summarized the state of engagement across its institutions in a published infographic called “Scanning the Engagement Landscape: University Engagement by the Numbers” (2015). Using the Kellogg Commission’s 1999 report on “Returning to Our Roots: The Engaged Institution” as a benchmark moment in the movement, they analyzed the increase in engagement networks and organizations, journals, and awards from 1999 to 2015. The infographic found that the number of networks and organizations increased from 12 to 47 (292% increase), the number of journals rose from 13 to 39 (200% increase), and the number of awards grew from 12 to 44 (267% increase). The graphic also noted that of the 203 APLU member institutions examined, 46% have outreach or engagement in their mission, vision statement, or core goals; 47% have received the Carnegie Engaged University Classification; and 57% have a central office of outreach, engagement, or community partnerships. All of these are encouraging numbers for the state of engagement in the United States and show the APLU institutions responded to the call with increased emphasis in the 21st century. Even so, there is room for improvement, including increasing the emphasis on engagement at an administrative and leadership level. The report noted only 10% of the institutions have a central administrator with the title or job focus on outreach and/or engagement.

One of the partnerships and outgrowths of land-grant institutions was a Committee on Institutional Cooperation's (CIC) report entitled *Resource Guide and Recommendations for Defining and Benchmarking Engagement*, generated by the CIC Committee on Engagement formed in 2002 (CIC, 2005). Chaired by Hiram E. Fitzgerald, one of the leading engagement scholarship scholars at Michigan State University, this report responded to the work of the Kellogg Commission and brought some needed guidance to this renewed area of scholarship. Drawing from member institutions, this report defined engagement:

Engagement is the partnership of university knowledge and resources with those of the public and private sectors to enrich scholarship, research, and creative activity; enhance curriculum, teaching and learning; prepare educated, engaged citizens; strengthen democratic values and civic responsibility; address critical societal issues; and contribute to the public good. (p. 4)

The seven engagement benchmarks and outcome indicators recommended providing evidence in the following areas: institutional commitment to engagement, institutional resource commitments to engagement, student involvement in engagement activities, faculty and staff engagement with external constituents, institutional engagement with their communities, assessment of impacts and outcomes of engagement, and resource/revenue opportunities generated through engagement. The CIC report was a critical catalyst in moving the scholarship of engagement forward.

Land-grant institutions have faced their own set of unique challenges while trying to prioritize engagement, particularly with some of the economic struggles the nation has faced over the last decade. The Morrill Act of 1862 celebrated its 150th anniversary in 2012. At that time, state appropriations per student had fallen by almost 25% over the previous decade,

sending tuition costs up almost 6% above inflation rates (De Vise, 2012). While serving over four million students, land-grants conduct approximately two-thirds of the nation's academic research while charging much less tuition than comparable private institutions. Therefore, any decrease in public appropriations, even small ones, can have a significant impact on land-grants' ability to serve their students as well as fulfill any engagement obligations. These economic challenges not only impact the institutions and their students but can also impact their regions. Franklin (2009) recently examined the engagement of six land-grant institutions and their approaches to regional economic development. One of the keys to successful approaches was "grounding the engagement in understanding the region's needs and instituting a strong linking structure to match those needs with university interests" (p. 71). Franklin also noted, "University leaders who established successful regional partnerships also understood the importance of ensuring parity between institutional mission and goals of the partnership" (p. 71). She suggested state policy be shaped to incentivize these partnerships to align university and community goals. Despite the challenges of difficult economic times and budget cuts, this research shows it is not only important for land-grant institutions to stay engaged with the community, but if approached strategically, it is also a win-win for both the institution and the community.

Campus Compact

Much like the work of the NASULGC/APLU, many other organizations have played critical roles in advancing the topic of engagement in American higher education. One of the key organizations that pushed the issue forward was the Campus Compact. Founded in 1985 to combat the public image that institutions and students were self-absorbed and unconcerned with community service, the organization today is a national coalition of over 1,100 colleges

and universities in 34 states (Campus Compact, 2016). Today Campus Compact “enables campuses to develop students’ citizenship skills and forge effective community partnerships” and “support faculty and staff as they pursue community-based teaching and scholarship in the service of positive change.” At the same time Boyer was drawing attention to the scholarship of application and engagement, Campus Compact was publishing works such as *Integrating Public Service with Academic Study: The Faculty Role* (Stanton, 1990) that strongly promoted the involvement of faculty in community service.

Much of the early work of the Campus Compact was focused on service learning, civic engagement, and a “growing concern about college students dropping out of the democracy” (Hollander & Meeropol, 2006, p. 77). However, many across the nation quickly realized the concerns regarding the disengaged student could not be separated from the issues of the disengaged institutions and faculty members. In 1999, the Compact addressed this topic with the Presidents’ Declaration on the Civic Responsibility of Higher Education, a response based on a meeting with university and college presidents that was cosponsored with the American Council on Education. In relation to student engagement, “the declaration also acknowledged that institutions of higher education had to model this involvement by addressing the needs of their own communities” (p. 77). Movements such as this were a major shift in philosophy as the responsibility of an institution to its community was becoming more emphasized. Student engagement was not likely to happen without institutional engagement.

One critical way Campus Compact supported the idea of the engaged campus was through the development of assessment and inventory instruments that helped campuses evaluate engagement activity. In the late 1990s they developed the Service Learning Pyramid

(Hollander & Meeropol, 2006), a schematic representation of the developmental levels of service-learning that allowed institutions to examine their progress while also developing strategies for increasing engagement. Campus Compact also “recognized the need for a tool to help conceptualize and assess the engaged campus” (p. 80). With that goal in mind, they developed the Indicators of Engagement Project in 2002 with funding from the Carnegie Corporation. Building on the Service-Learning Pyramid, it included 13 indicators of campus engagement and addressed critical issues such as “institutional culture, curriculum and pedagogy, faculty roles and rewards, institutional infrastructure, and campus/community partnerships” (p. 81). Instruments such as these provided additional support for campuses all across the country to critically assess their engagement culture and practices and find ways for improvement. Organizations such as Campus Contact were helping institutions think through these engagement issues in ways that had not occurred in the decades prior.

Carnegie Foundation

The Carnegie Foundation for the Advancement of Teaching has been a key influence in U.S. higher education since its creation in 1905 and has played a critical role in the engagement movement within the United States for multiple decades. As already discussed, it published *Scholarship Reconsidered* (1990) as well as the follow-up work, *Scholarship Assessed* (1997). The Carnegie Foundation continues to be one of the leading drivers of engagement today. Since 1973 Carnegie has provided a framework for classifying the types of colleges and universities in the U.S. They describe the classifications as “a way to represent and control for institutional differences” (Carnegie Foundation, 2016). The classifications have been updated and refined multiple times over the last four decades. The 2005 revision for the first time created an elective classification for Community Engagement,

a voluntary designation that institutions could apply to receive. One impetus for the elective was to “counter the tendency of institutions to view the classification as a ranking system” (Ward et al., 2013, p. 292). This new elective was a big step forward for the recognition of engagement within higher education. Driscoll (2009) noted, “The national recognition of a Carnegie classification has enhanced both the prominence and potential of community engagement in colleges and universities” (p. 11). The opportunity to pursue this classification highlighted the significance of higher education’s role in the community and the value of the scholarship of engagement. In December 2006, the first 76 schools were selected as institutions of community engagement.

The classification played an important role in bringing some clarity and definition to this area of scholarship. It provided universities and colleges a way to affirm that engagement was part of its identity and institutional culture. The most current definition of the Community Engagement Elective is described as such: “Community engagement describes collaboration between institutions of higher education and their larger communities (local, regional/state, national, global) for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity” (Carnegie Foundation, 2018). The term “community engagement” was used to be more inclusive and to capture the broad scope of activities that comprise interactions between institutions and local communities. The talk of reciprocity is also key, having been called “the most important part of the definition...which is often missing from other articulations of engagement” (Ward et al., 2013, pp. 287-288). This idea of collaboration and reciprocity is captured in what the Carnegie Foundation (2018) describes as the purpose of engagement:

The purpose of community engagement is the partnership of college and university knowledge and resources with those of the public and private sectors to enrich scholarship, research, and creative activity; enhance curriculum, teaching and learning; prepare educated, engaged citizens; strengthen democratic values and civic responsibility; address critical societal issues; and contribute to the public good.

This new framework brought a much-needed engagement focus to institutions across the nation. It affirmed what engagement scholars, the Kellogg Commission, land-grant institutions, the Campus Compact, and others had been emphasizing. It advanced the idea that service and engagement should be part of an institution's mission and culture, a recognized form of scholarship, and a collaborative partnership of learning and working with the community.

The Community Engagement Elective was a landmark moment in recognizing university engagement's value and impact. Driscoll (2009) said, "The national recognition of a Carnegie classification has enhanced both the prominence and potential of community engagement in colleges and universities" (p. 11). The application process has already been through four cycles of institutions seeking the elective designation in 2006, 2008, 2010, and 2015. To date, 361 U.S. institutions have received this elective classification in either Curricular Engagement, Outreach and Partnerships, or both. The application process is intense and requires well-documented evidence that community engagement is an integral part of the institution's identity and culture. The pursuit of this elective has spurred many institutions to examine the data and evaluation processes in place to assess their own engagement practices, or the lack thereof. The Carnegie Foundation has played a critical role in pushing the engagement conversation, from the initial publication of Boyer's (1990)

Scholarship Reconsidered to the creation of the growing elective classification. The Foundation brought attention to the fact that higher education must address engagement gaps in assessment and evaluation, faculty support, promotion and tenure processes, and improved collaboration with partners (Driscoll, 2009). Though much work remains to be done, the value of this area of scholarship has been significantly advanced in the last decade, and the conversation regarding community engagement has been revived.

Engaged Scholarship Consortium & Academy of Community Engagement Scholarship

In more recent history, two organizations have played a critical role in supporting and advancing the cause of engagement scholarship in the 21st century. The first of these organizations was birthed through the leadership of three land-grant institutions: Penn State University, Ohio State University, and the University of Wisconsin-Extension. They convened the first meeting of the National Outreach Scholarship Conference (NOSC) in 1999. In 2011 this organization was renamed the Engagement Scholarship Consortium (ESC), a non-profit educational organization comprised of 36 higher education member institutions. The Consortium's goal is "to work collaboratively to build strong university-community partnerships anchored in the rigor of scholarship and designed to help build community capacity" (ESC, 2018). Key elements of the ESC agenda include researching and studying the scholarship of engagement, influencing higher education faculty performance evaluations to include engaged scholarship, promoting the study of engaged scholarship on community-campus partnerships, conducting workshops and conferences throughout the world, and promoting the publication, communication, and dissemination of engagement scholarship.

One of the initiatives the ESC supports is the Academy of Community Engaged Scholarship (ACES). Created in 2013, the purpose of ACES is described thus:

The mission of ACES is to provide expertise to policymakers, higher education institutions and organizations, community leaders, and national and international entities interested in addressing complex societal issues through the effective engagement of higher education with community members and organizations.

(ACES, 2018)

The Academy works on issues of policy development, dissemination of evidence-based practices, and advancing community engagement scholarship. The primary way ACES accomplishes these goals is by recognizing individuals who have excelled in engagement work and engaging these people in activities and projects to further advance community engagement issues. The inaugural class of honorees was inducted into the Academy in 2014. Over the first three years, 37 engagement scholars and leaders have been honored for their work in the field of community engagement. Organizations such as the Engagement Scholarship Consortium, that annually brings together engagement scholars from all over the country, and the Academy of Community Engaged Scholars, that have honored exemplary leaders, have provided forums for the advancement of engagement scholarship in higher education.

Faculty on the Frontlines

While institutions receive the designation of community engagement from organizations such as the Carnegie Foundation, it is individual faculty members who are building the relationships and conducting the engagement work. Higher education faculty are on the front lines of the engagement movement on behalf of their institutions. While

institutional support is critical, it largely works in the background, creating the culture and climate in which faculty are able to engage. The role faculty play in educating students and conducting research activities has been explicit in U.S. higher education for many years. In many ways, the roles of teaching and research are easier to understand as well as easier to assess, one of the challenges that *Scholarship Assessed* (1997) began to address. Ward and Moore (2010) noted, “Many campuses struggle with what it means for faculty to engage in the community as part of their scholarly agenda” (p. 43). In describing the role of service, Lawrence, Ott, and Bell (2012) noted, “Professors’ service obligations are rarely stated explicitly. They are part of a psychological contract that is open to interpretation by faculty and administrators” (p. 345). The role faculty play in engagement can be a little more difficult to grasp, but it is a critical service and needs to be better understood.

As higher education has progressed over the decades, the missions of research and teaching have largely remained primary functions. However, what has shifted and evolved is the role institutions play within their communities. Community engagement has been described as “one of the major innovations within higher education over the last 20 years” (O’Meara et al., 2011, p. 84). The demand and expectation for community engagement and involvement has grown, in many cases driven by pressures at the state and local level. As institutions struggled with this evolution, they realized they need to better understand the role of faculty in this movement so the institutions can provide the necessary support. Aronson and Webster (2007) said, “Little happens in the way of university-community engagement without the hard work, dedication, and expertise of faculty members” (p. 270). Faculty are best positioned to develop meaningful relationships with community partners during which

their research and scholarship can be mutually created and shared with society for the public good.

Faculty are the institutional representatives who seek out new scholarship experiences that can be explored in reciprocal and mutually-beneficial relationships with the community. There is evidence that the best predictor of institutionalizing engagement principles comes from faculty involvement and support, above that of institutional support (Bell, Furco, Ammon, Muller, & Sorgen as cited in Chadwick & Pawlowski, 2007). Faculty are the heartbeat of an institution, with a deep and rich knowledge base and a desire to learn more in order to contribute to the literature and society. If faculty are on the front lines of service and engagement in higher education institutions across the United States, then institutions need a better understanding of who these faculty are and what motivates or hinders their work.

Epistemology, Time, and Methods

One of the challenges of understanding the role of faculty in engagement is the incredible complexity of their work. Research has shown “faculty work defies categorization; involves complex and overlapping types of motivations; and engages both personal and professional passions, values, and commitments” (O’Meara et al., 2011, p. 85). O’Meara and Niehaus (2009) found that rather than a single motivation, faculty members have dominant and supporting motivations for engagement. In addition, a faculty member’s desire and motivation to participate in engagement are influenced by the time available for this work. Faculty are pulled in multiple directions by the demands of teaching, research, and service. An understanding of faculty time allocation sheds light on the challenges of balancing these duties.

Epistemology. One understudied area of faculty motivation has been epistemology, which deals with the nature of knowledge and the methods of how knowledge comes to be known. Research has shown a faculty member's approach to epistemology is recognized as an important factor in community engagement (Colbeck & Wharton-Michael, 2006; Vogelgesang et al., 2010). However, some have noted that "the dominant epistemology of the academy runs counter to the civic engagement agenda" (Saltmarsh, Hartley, & Clayton, 2009b, p. 3). Schön (1995) described Boyer's work as the "new scholarship" that is in opposition to the "technical rationality" that is the predominant epistemology in many educational institutions (p. 27). Schön noted if an institution takes a more traditional stance on teaching, research, and knowledge production, faculty members holding a different epistemological view may run into tensions between other faculty or departments which hold to a more expert model of knowledge production. Schön (1995) called for "an epistemological battle" in order to change the rules and norms prevalent in the modern research university. Much of the work of public scholarship is "grounded in the assumption that knowledge is socially produced" (Ellison & Eatman, 2008, p. 7). The inertia required to overcome the previous norms of the research university and create institutional change is great. For the engaged scholar, it has been noted this conflict "might influence how their work is regarded within the institutional and disciplinary rewards systems" (O'Meara et al., 2011, p. 87). However, recent years have seen a renewed discussion for the support of and integration of all three forms of scholarship (teaching, research, and service) that has not necessarily translated into a revival of engagement practices. O'Meara and Rice found, "The scholarship of engagement remains a contested mode of academic inquiry that is often simplistically linked to service and outreach missions" (Nicotera, Cutforth, Fretz, &

Thompson, 2011, p. 38). Until a more comprehensive view of academic work is accepted, “the extent to which this new classification of scholarship is clearly defined and recognized in institutional reward systems is likely to influence professors’ motivation to participate in community engagement practices” (Nicotera et al., 2011, p. 38). The implication is, “In today’s academy, scholars need to recognize, understand, and respect multiple ways of knowing, interpreting, and practicing” (Fear & Sandmann, 2016, p. 106). Until more significant changes take place in these university policies and procedures, many faculty, particularly untenured faculty, are forced to choose between “creating products that foster career growth and creating a connection between the academy and the community” (p. 38).

The faculty are the bridge between the institution and the community. Even when the personal motivation and apparent institutional support are there to engage, however, tensions still exist, and the pathway is difficult to navigate. Nicotera et al. (2011) conducted a qualitative study to explore the impact of institutional funding on faculty roles and practice in community work. Several key themes emerged, including one that noted, “Participants expanded their professional roles by embedding their disciplinary expertise and personal interests, passions, and identities with needs that exist beyond the campus” (p. 42). Despite evidence of the success of these faculty-community partnerships, the research noted, “Participants developed a passion for community engaged work while simultaneously uncovering a tension between the work and meeting traditional academic standards for what counts as research and scholarly publication” (p. 45). In order for faculty to better pursue these passions, the university still has more work to do to ensure these motivations may be properly supported and rewarded.

Faculty time allocation. As described earlier, the focus of university mission statements generally falls under the three areas of teaching, research, and service; thus, those are the main areas that compete for faculty time. As time is finite, faculty have a limited number of hours to dedicate to these pursuits. Research shows that the ways these hours are allocated are often in response to institutional priorities and policies. Doyle (2002) noted that over the last half of the 20th century, faculty saw a reduction in their formal teaching loads from about 16 contact hours to 12 contact hours. The general assumption is that more time is being spent on research activities. A study conducted by Milem, Berger, and Dey (2000) confirmed that belief in examining national survey data that spanned from 1972 to 1992, noting, “There was a general and significant increase in time spent engaged in research at all four-year institutions” (p. 465). Their study also refuted the idea, however, that faculty are spending less time engaged in teaching, noting an 8% increase over that span. This study did not examine service time, but speculated, “It is possible that the extra time that faculty devoted to research resulted from reduced involvement in service-related activities” (p. 467).

More recent research has included the service component of faculty time allocation, particularly regarding tenure, promotion, and rewards processes. Link, Swann, and Bozeman (2008) examined the time allocation of faculty from 150 Carnegie Extensive Doctoral/Research Universities and found the following allocations of time by category: 53.96 mean hours per week comprised of 16.74 hours on teaching, 19.42 hours on research, 4.58 hours on grant writing, and 13.22 hours on service. Other findings from this study noted that non-tenured faculty allocate fewer hours to service, that hours spent on service increased with rank, that women spend more time on service, and that time spent on service increased through the career. A more recent study of 111 faculty members at Big Ten research

universities found very similar results in a faculty time study, noting faculty spent 12.9 hours on service-related activities (Jackson, Waugaman, O'Meara, Haider, & Kuevaeva, 2015).

They also found women spend more time on service. A recurrent theme in this literature is that as faculty gain authority and established careers (i.e., tenure), they might allocate less time for activities they find undesirable or less fulfilling.

Faculty engagement methods. A recent study of faculty engagement collected data to create a typology of the types of activities that faculty members engage in that are considered engaged scholarship. The authors described a “disjuncture between the rhetoric of institutional leaders and the reality of engaged scholars” which precipitated a need for “a way of describing publicly engaged scholarship that makes sense both to institutional leaders and to faculty members” (Doberneck, Glass, & Schweitzer, 2010, p. 7). The study was limited to faculty from Michigan State University, a land-grant institution and a national leader in promoting the value of engaged scholarship. Michigan State’s promotion and tenure policies were revised in 2001 to emphasize scholarly outreach and engagement and make it easier for faculty to report. The authors identified 14 types of publicly engaged scholarship categorized into four broad categories: publicly engaged research and creative activities (discovery of new knowledge), publicly engaged instruction (sharing knowledge both formally and informally), publicly engaged service (using university expertise to address specific community issues), and publicly engaged commercialized activities (knowledge translated into commercial applications for the community). A value of this research is that “the typology, especially when coupled with institutional and disciplinary perspectives, may be an effective way for young scholars to envision professional pathways to publicly engaged scholarship” (p. 30). In addition, this research gives faculty and administrators a common

framework and language to assess faculty engagement practices, moves beyond the rhetoric in order to communicate with external stakeholders, and helps put policies in place to support the engaged scholar.

Theory: Faculty Engagement Model

This study is guided by the Faculty Engagement Model (FEM) developed by Wade and Demb (2009). The authors conducted a review of the literature to identify “the most prevalent activities faculty undertake that also meet the Kellogg Commission criteria of engagement as a two-way street” (p. 7). Harkening back to Boyer’s idea that the scholarship of engagement should benefit both society as well the institution, they closely examined the research, teaching, and service functions of faculty roles that best contribute to the institution’s mission of scholarship and to serve the public good.

Wade and Demb organized their model around three sets of factors believed to impact engagement: institutional, professional, and personal dimensions. They drew on the work of the Holland Matrix (1997), the Kellogg Commission (1999), and Colbeck and Wharton-Michael’s (2006) conceptual model for faculty motivation and engagement to develop the primary contributors to the institutional dimension. These seven institutional factors included mission and priorities, leadership, institutional policies, budget and funding, engagement structure, faculty involvement, community involvement, institutional type, and prestige. The professional dimension of the Faculty Engagement Model drew on an in-depth examination of literature organized into three primary categories: discipline, socialization, and rank. Tenure status is also considered an element of the professional dimension. The final dimension focused on personal factors including race, ethnicity, gender, values/beliefs, motivation, epistemology, and previous experience. The model is represented in Figure 1.

Figure 1
Faculty Engagement Model (FEM)

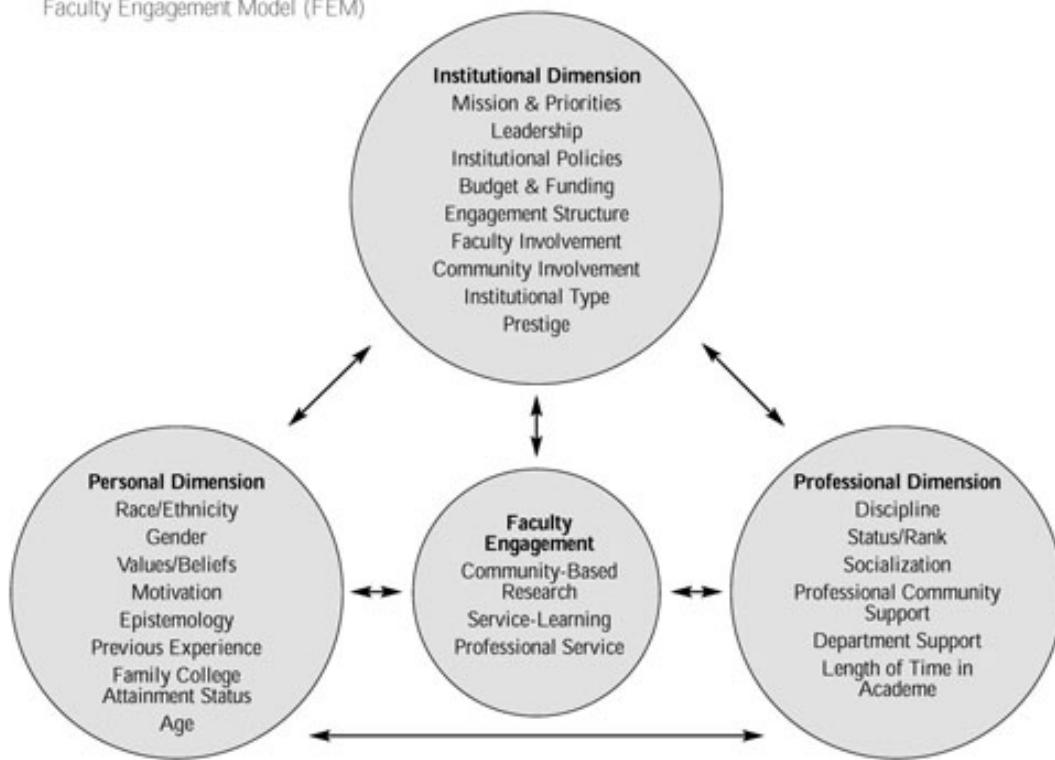


Figure 1. Faculty Engagement Model. Reprinted from “A Conceptual Model to Explore Faculty Community Engagement,” by A. Wade and A. Demb, 2009, Michigan Journal of Community Service Learning, Spring 2009, p. 8. Copyright 2009 by OCSL Press.

The Faculty Engagement Model exemplifies the complexity in this research topic.

Wade and Demb (2009) noted, “The FEM demonstrates the challenge of understanding and explaining faculty engagement behavior” (p. 12). The three primary dimensions interact with each other and can weave a complex web of connections. For example, a professional factor of socialization can impact a personal factor of motivation, or a personal factor such as race or gender may influence choices in the professional dimension such as choice of academic discipline. Despite its complexity, the FEM provides a good theoretical foundation for understanding faculty engagement practices. The authors noted, “The model contributes to the identification of a research agenda related to engagement and creates a context within

which institutional leaders may consider policies and programs to enhance faculty involvement in engagement” (p. 13). This study advances that research agenda by applying the FEM to a large, multi-institutional data set to bring better understanding to faculty engagement practices.

Personal Characteristics

One area of research that provides insight into understanding faculty engagement practices is an examination of the personal characteristics of those involved. Wade and Demb (2009) said, “Because the presence or lack of supportive institutional norms and reward systems cannot entirely explain the appeal of service-related activities for faculty, it is often the personal characteristics of faculty, such as race/ethnicity and gender, which help account for engagement participation” (p. 11). While demographic data is one of the easier things to collect, that does not lessen its value as a lens. Understanding any trends in the personal characteristics of faculty helps researchers dig deeper and attempt to understand the how and why behind engagement practices. The literature sheds light on several of the more significant associations.

Race/Ethnicity

A theme that appears prominently in the research is, “Faculty of color are more likely to participate in engagement-oriented activities than white faculty” (Demb & Wade, 2009, p. 11). Antonio et al. (2000) examined the nation’s faculty in a study focused on community service in higher education using data from the 1995-1996 survey conducted by the Higher Education Research Institute at the University of California, Los Angeles. The research revealed that faculty of color had significantly higher differences over white faculty in four areas of service: involvement with student groups engaged in service (13 points higher),

support of goals for providing services to the community (10 points higher), commitment to instilling an ethic of service in students (11 points higher), and belief that community service should be a graduation requirement (12 points higher). Vogelgesang et al. (2010) had similar findings about minority involvement, finding that Black and American/Indian/Alaskan Native faculty were more likely to use their scholarship to address community needs.

Baez (2000) also examined the importance of service to faculty of color in a study that dug a little deeper into the ‘why’ of this disparity. His qualitative research examined 16 faculty of color at a large and predominantly White, private, Carnegie Research II university. His sample was evenly split between tenured and non-tenured faculty, included six men and ten women, and was representative of ten academic disciplines. He found service was an important concern for 14 of the 16 faculty members, despite the fact it was not one of the more important evaluation criteria for the institution. A theme that emerged from the study was that faculty of color see service as setting the stage for the critical agency of the faculty member, particularly regarding race-related work and political change that lead to social justice. Baez noted faculty of color “use service to redefine themselves as scholars and activists, and to connect them to their racial communities in important ways” (p. 388). For faculty of color, it is especially important that merit and scholarship be inclusive of the service and engagement work that many wish to pursue.

Lunsford and Omae (2011) examined how faculty connect their scholarship to external audiences and engagement and found some interesting race-related factors. Their study found faculty of color are more likely to be involved in engaged teaching such as workshops for practitioners and non-degree instruction as opposed to White faculty, who are more likely to be involved in engaged service, which includes consulting and technical

assistance among other tasks. The implication is that engaged service may provide access to larger social networks and financial resources. Engaged teaching is often considered more traditional university service rather than teaching, and thus is not as highly valued in many institutions. That characteristic of assessment can jeopardize the promotion and tenure pathway for these faculty. In addition, they noted, “White faculty and staff members are more likely than their counterparts to generate scholarship about their engagement” (p. 354). The production of these scholarly artifacts gives White faculty another advantage under traditional promotion and reward structures.

In discussing the overrepresentation of minorities (as well as women) in community engagement, Ward (2003) noted a critical point: “As long as faculty who are on the margins (adjuncts, faculty of color, women faculty) are supporting community service initiatives, then community service initiatives will stay marginalized” (p. 99). Unless faculty of all ethnicities achieve a better balance of community engagement, and all methods of scholarly engagement are recognized, the cycle will perpetuate itself and the scholarship of engagement will continue to be marginalized and secondary to research and teaching within U.S. institutions. A better understanding of the value of engagement for faculty of color can serve to move the community engagement discussion forward.

Gender

A second theme in the literature is that female faculty are more likely to participate and promote engaged scholarship activities than male faculty. Antonio et al. (2000) said, “We find that women faculty score higher than their male counterparts by substantial margins on nearly all measures related to community service” (p. 380). Areas of distinction in which women represented higher proportions than men included performing service or

volunteer work including community service in coursework, and strongly favoring institutional policies that support community service and involvement. The research found the gender gap particularly strong in promoting student involvement, noting, “Women faculty are five times more likely than men to teach courses with a community service requirement and 60 percent more likely than men to endorse community service as a graduation requirement for students” (p. 380). More recent reports show similar findings. Vogelgesang et al. (2010) also found that women are more likely to practice engaged scholarship, noting, “Women faculty were substantially more likely than men (53% of all women versus 45% of men) to report that they use their scholarship to address community needs” (p. 448). O’Meara (2002) also found that women self-identified more with service scholarship than men. The literature describing the gender gap is well known.

Lunsford and Omae’s (2011) research cited in the earlier discussion on race also applies to gender. Male faculty were more likely to be involved in engaged service (i.e. consulting) and more likely to produce scholarly artifacts from these practices, while female faculty were more drawn to engaged teaching (i.e. non-degree instruction) that was not as highly valued by many institutional reward systems. The implication is the same as before regarding race—this imbalance may hinder the opportunity for female faculty to achieve tenure or promotion. However, the patterns of engagement by gender are not always clear. Demb and Wade (2012) administered a survey to which 436 tenure track faculty from a large Midwestern university responded. While the results were consistent with previous research indicating women were more likely to participate in engagement, it did reveal patterns in which men were more heavily involved in community-based research and service-learning. There does appear to be other factors moderating the influence of gender. While the

correlations between gender and service are recognizable, what is not fully understood is the interactions among personal and professional factors. Demb and Wade (2012) suggested, “It is plausible that gender and beliefs about the role of higher education are inextricably linked, and that personal belief systems or a conviction about the social purpose or role of higher education are as important as gender” (p. 339). Antonio et al. (2000) found that when other personal and professional characteristics are controlled for, gender and service did not exhibit the same strong correlations. Other research has also noted that in larger-scale studies that include factors such as race and gender, there is “less obvious discrepancy in engagement activity when one controls for such factors as career stage, institutional type, discipline, and the epistemological beliefs of the faculty” (O’Meara et al., 2011, p. 86). This area of discussion is one in which further research is needed to understand the interactions.

Humanistic Orientations & Epistemology

Several studies have found interesting parallels regarding engagement, personal belief systems, and epistemology. Research suggests that faculty with humanistic orientations are more strongly associated with service than those with a status or intellectual orientation (Vogelgesang et al., 2010). Antonio et al. (2000) described a humanistic orientation consisting of five goals: “Helping to promote racial understanding, influencing social values, helping others in difficulty, developing a meaningful philosophy of life, and becoming involved in programs to clean up the environment” (p. 379). The status orientation consisted of two goals: “Obtaining recognition from colleagues and becoming an authority in one’s field” (p. 379). Faculty with a status orientation were connected to more traditional scholarship activities and individual prestige and were not strongly associated with service or engagement activities. In contrast, those with humanistic or social change orientations were

positively associated with service. The importance of the personal belief system appears to be critical in understanding the faculty member's involvement with engagement and may interact with other factors such as discipline and socialization pressures that are discussed later.

In regard to epistemology, Colbeck and Wharton-Michael (2006) found faculty who believe knowledge is constructed through experience are more oriented toward engagement activities than those who believe knowledge is more absolute. Wade and Demb (2009) noted:

This research suggests that faculty members with a ‘solidarity approach’ are more likely to participate in service-oriented activities, where solidarity is defined as a belief that knowledge is constructed through experience with an emphasis on multiple ways of knowing and sources of knowledge, including community. (p. 12)

These views contrast with the more absolute or objective approaches of knowledge construction and the technical rationality that Schön discussed. Further understanding of the relationship between epistemology and engagement could help institutions learn how to value its scholarly implications and support faculty.

Professional Characteristics

Another area of research relevant to this discussion is the professional characteristics that describe individual faculty members. These include the status or rank held by an individual at an institution, including professional title and tenure status, as well as the discipline or department in which they are situated, along with the social pressures that come from these positions and environments. These professional characteristics give insight into another dimension that influences faculty engagement practices.

Status/Rank

Faculty status or rank is believed to be a factor in a member's involvement in engagement. Antonio et al. (2000) found this to be true, noting, "Lower ranking faculty members generally demonstrate the highest levels of commitment to community service activities" (p. 382). Their analysis found that non-tenure track faculty are more likely to engage in community service and engagement activities than full professors who are generally less supportive. Vogelgesang et al. (2010) revealed similar results, noting, "Lecturers/instructors perceived greater institutional commitment to community engagement than faculty on the tenure track" (p. 448). Though in contrast to the prevailing thought, they also found that assistant and associate professors reported more collaboration with the community in regard to research and teaching than both lecturers/instructors and full professors, a fact they found surprising given the belief that engagement work can detract from the tenure portfolio. They attributed the differences, however, to the higher percentages of women and people of color at those ranks.

It should be noted that promotion and tenure status and policies, according to the Faculty Engagement Model, influences both the professional and institutional dimensions. On one hand, it is intimately tied to the status and rank element described by Wade and Demb (2009). The current tenure status of a faculty member has been shown to influence involvement with engagement. In discussing motivations, Jaeger and Thornton (2006) noted faculty often act on intrinsic, personal motivations for engagement once the pressures of extrinsic motivations such as tenure have passed. Individual faculty do not set promotion and tenure policies and procedures; those are determined by institutional decisions. Thus, tenure,

and more specifically promotion and tenure policies, are an element of influence at the institutional level of the Faculty Engagement Model as well.

Some research has suggested that involvement in engagement activities has an inverse relationship with personal and institutional prestige, suggesting that as professional and institutional prestige rise, a faculty member's commitment to engagement declines. O'Meara (2002) and Baez (2000) both support this finding, particularly regarding junior faculty's participation in service activities, whom they found to be more involved. It should be noted that support of this idea is mixed, and some research has shown conflicting findings. Abes, Jackson, and Jones (2002) conducted a survey to analyze factors that motivate or deter faculty's use of service learning and found among those faculty members not already involved in service-learning, junior and non-tenured track faculty were the least likely to begin participation. Demb and Wade's (2012) work also supported the mixed findings of recent research in comparing non-tenured and tenure track faculty, noting, "Depending on the type of engagement activity, the participation by tenured and non-tenured faculty is likely to vary" (p. 357). It appears unclear what the true effect of rank is and that other factors, including discipline and socialization, may play a larger role.

Discipline & Socialization

A recurring theme in the literature is the effect that academic discipline appears to play in a faculty member's participation in engagement activities, often noting disciplinary characteristics are stronger influences on faculty than institutional affiliations. Research reveals, "Involvement varies by discipline and type of engagement activity" (Wade & Demb, 2009, p. 10). Antonio et al. (2000) found that faculty in the social sciences tend to be the most involved and have the most personal commitment to community service, while those in the

physical sciences, humanities, and English are among the weakest participants and supporters. Braxton and Luckey (2010) also found that “academic discipline plays a part of some significance in the scholarship of engagement” (p. 87). Similar to Antonio et al. (2000), they found a pronounced role for sociologists. Vogelgesang et al. (2010) shared similar results, noting the fields of education, forestry/agriculture, and the health sciences were most likely to report the use of their scholarship to address community needs, while faculty in math/statistics, humanities, and English were the least likely to report this kind of activity. Demb and Wade’s (2012) findings were also consistent with previous research, finding the highest levels of engagement with faculty in social work, education, human ecology, and agriculture. There appears to be some research consensus about the types of disciplines that are more engaged.

Doberneck and Schweitzer (2017) examined the research regarding disciplinary differences in engaged scholarship. Specifically, they examined if an analysis using the Biglan Classification of Academic Disciplines revealed variations in faculty members’ publicly engaged scholarship. Biglan’s research studied disciplinary subject matter characteristics and their influence on departments and faculty (1973). His work has shown remarkable persistence and continued validity over the forty years since his initial publication in 1973 and is still considered a valuable conceptual framework for studying academic disciplines. Biglan’s (1973) classification included three dimensions: hard or soft, pure or applied, and life or non-life systems. The hard-soft dimension distinguishes “hard” disciplines such as the physical sciences and engineering that tend to be guided by paradigm consensus from the “soft” disciplines of social sciences, education, and the humanities. Disciplines such as education, engineering, and accounting are viewed as the “applied”

disciplines with their concerns over more practical applications of the subject matter as opposed to “pure” disciplines such as mathematics, physical sciences, and social sciences. The final dimension distinguishes between disciplines such as agriculture, biology, and social sciences that have “concern with living or organic objects of study” as opposed to areas that do not study living things such as mathematics, engineering, languages, or finance.

Doberneck and Schweitzer (2017) studied a research-intensive, land-grant, Carnegie-engaged institution from 2001-2006 with data from 171 faculty members. The authors examined the disciplinary variations in publicly engaged scholarship while analyzing reappointment, promotion, and tenure forms. In this study, faculty in the applied, hard, and life disciplines were more likely to report publicly engaged scholarship, and faculty in applied and life disciplines were more likely to report publicly engaged research and report publicly engaged service and practice. The disciplinary categories showed statistically significant differences in the types of engaged activities for the applied, hard, soft, and life categories; statistically significant differences in the intensity of the activities for applied and life categories; and statistically significant differences in the degree of engagement for life activities. Pure disciplines revealed little or no engagement activities while applied disciplines revealed a diversity of many activities. Applied disciplines and life disciplines were more likely to have more intensity and degree of engagement than their pure or non-life counterparts. There were no significant differences between hard and soft dimensions in either intensity or degree of engagement. Among the implications from this study are the idea that “one-size-fits-all” promotion and tenure policies need to be reconsidered to allow for disciplinary variations; and professional development may need to be reexamined so it is consistent with disciplinary variations in engaged scholarship.

An interesting parallel to the discussion on discipline, however, is the role socialization plays on faculty engagement. Research suggests that faculty socialization of behaviors begins in graduate school and is strongly reinforced by the culture of the department; it is a process that begins in the early stages of the professional career and faculty committed to the highest levels of engagement learn this message during graduate school (O'Meara, 2002). Socialization forces may include peers, various committees, departmental chairs, and other disciplinary factors that begin as students and extend into faculty appointments. Jaeger and Thornton (2006) described a system in which “new tenure-track faculty begin their positions full of energy and ready to serve their communities, but research shows that their energy for public service is quickly squelched and diverted to activities that will be rewarded” (p. 358). This professional socialization builds disciplinary norms that affect beliefs and motivations (Wade & Demb, 2009). Ellison and Eatman (2008) noted many junior and mid-career faculty “decide to postpone community-based teaching or research projects until later” due to the lack of support (p. 17). While rejecting the idea of a culture of indoctrination, departments are building organizational structures that frame acceptable practices. The result is an academic culture that motivates or discourages engagement based upon the organizational reward systems.

While disciplinary trends are evident, it should be noted the impact of departmental pressures cannot be isolated from individual faculty beliefs. Wade and Demb (2009) state, “When considering faculty beliefs rather than participation, different patterns emerge from the research and suggest that faculty in disciplines which are not commonly identified as service fields often place a high value on service even when they do not demonstrate service-oriented behaviors” (p. 10). While disciplinary factors may be moderated by other influences,

it is largely on the departmental level where the engagement battle will be fought. Ward (2003) noted, “Much of the rhetoric of engagement has been focused at institutional levels, but it is at the disciplinary level that professors will reach out and engage their communities (or not)” (p. 95). Even the humanistic and socially-minded faculty member faces a difficult challenge if the understanding at the departmental level is not achieved. More research and a greater appreciation of the influences at the disciplinary level is needed to understand the scholarship of engagement.

Barriers & Motivational Factors

Faculty surveys have cited various barriers that inhibit engagement scholarship, including faculty work constraints and time pressures, inadequate funding for engagement activities, limited faculty knowledge of engagement and professional development, and promotion and tenure policies that do not value engagement (Gelmon, Blanchard, Ryan, & Seifer, 2012). The traditional understanding of service within the higher education system also serves as a barrier. As described earlier regarding the history of the language of engagement, early definitions of university service were often inwardly focused and lacking in scholarly value. Institutions that still cling to this more traditional description and do not fully understand nor value community engagement and scholarship as described by the Carnegie Foundation hinder faculty members’ desires to participate in engaged scholarship. The socialization process described earlier that graduate students and young faculty experience is also a barrier to engagement. O’Meara (2005) found that two-thirds of chief academic officers believed the socialization occurs during graduate school which promotes traditional forms of scholarship and discourages participation in engagement scholarship. It contributes to a cultural cycle in which “history continues to repeat itself as graduate students

become specialized, narrowly focused researchers and are not aware of knowledge as having a public purpose" (O'Meara & Jaeger, 2006, p. 14). Jaeger and Thornton (2006) found the socialization message is sometimes indirectly pushed, noting, "Public service is verbally touted but not practically supported by the institution" (p. 354). Even when institutional language might promote engagement, institutional structures may inhibit faculty involvement. The documented concerns with institutional reward systems are also part of the socialization process that hinders engagement (Jaeger & Thornton, 2006).

Janke and Colbeck (2008) examined the effects of engagement on faculty members' academic work, research, teaching, and service and found several interesting results in their study that relate to motivation. Their case study looked at faculty from an architecture department at Penn State University and a landscape program at the University of Wisconsin which both offered service-learning courses. A key theme that emerged was that "faculty viewed their research, teaching, and service as integrated and not separate acts of scholarship" (p. 34). Despite this feeling, faculty still struggled with balancing the roles as well as the tension in what the institution considered aspects of their academic portfolio. In regard to service they made the following conclusion:

Faculty who have the opportunity to see, firsthand, the difference that they are making in improving the situation of a community or the education of a student may be more motivated to (continue to) engage in public scholarship than those who do not see such immediate, and sometimes tangible, effects of their work. (p. 39)

In addition, they observed those who experience all three roles of teaching, research, and service as complementary activities may be more motivated to remain engaged than others.

Since faculty reward systems have been historically based on research and teaching rather than service, the motivation for engagement has been intrinsic for many faculty. Jaeger and Thornton (2006) found, “Several faculty members...expressed that in the absence of extrinsic rewards the primary motivation for public service is the altruistic nature of the individual” (p. 357). In a review of the culture at Virginia Tech, the intrinsic value of engagement was also found to be a motivator, noting, among other things, that engagement helped keep faculty in touch with trends in industry and professions, provided opportunities for student career development, and improved faculty teaching and research efforts (Franz, Childers, & Sanderlin, 2012). Though promotion and tenure processes or salary rewards have often been difficult to obtain for faculty with an engagement focus, personal beliefs and values still motivate many to engage with the community. Demb and Wade (2012) said, “Research also indicates that faculty in more individual-centered disciplines such as humanities and physical and biological sciences, often place a personal value on service-oriented behaviors, even if they are not participating in these activities regularly through their scholarship” (p. 340). They also hypothesize that, as with gender, there may be moderating factors such as the personal belief systems that impact faculty in various disciplinary relationships.

In a study also related to intrinsic motivation, DeFelippo and Giles (2015) examined the relationship between mid-career faculty and the rates of participation in community engagement of 102 faculty members from three New England public universities. They described mid-career faculty as comprising the largest group of tenured faculty in the United States, producing the most published articles, conducting the most teaching, and conducting more consulting than at any other time in their careers. The study found at a time when these

faculty are seeking more meaningful work outside of the classroom, they observed a strong relationship between community engagement activities and faculty vitality and productivity. Vitality was defined as “the constellation of attitudinal dispositions and psychological states.... Dispositions included balance, challenge seeking, creativity, curiosity, energy, grit, growth mindset, motivation, optimism, and risk taking” (p. 2). Among the implications is community engagement appears to be a natural growth experience for mid-career faculty and these faculty should be better supported by their institutions to participate in engagement.

Over the past two decades, and particularly since the America COMPETES Reauthorization Act of 2010, a significant motivating factor in STEM funding at the federal level has been the inclusion of a broader impacts emphasis in the merit review process for National Science Foundation proposals (NSF, 2014). NSF describes the broader impacts criteria as “the potential to benefit society and contribute to the achievement of specific, desired societal outcomes” (p. 3). The 2014 Broader Impacts Infrastructure Summit brought together professionals from 80 higher education institutions and nonprofits. There, it was noted, “Principal investigators have independently viewed broader impacts as both the linking of their research to societal impacts and as educational/outreach activities that benefit society” (p. 1).

Andrews, Weaver, Hanley, Shamatha, and Melton (2005), noting the call from funding organizations such as NSF and broader impacts in research grants, found interesting results about scientists and their public outreach activities. They examined the participation and motivating factors of scientists and graduate students. Regarding motivations, the research found a ‘desire to contribute’ and ‘fun or enjoyment’ as the top two factors. These scientists and students wished to share their knowledge and enthusiasm for science and found

enjoyment in these outreach experiences, particularly with K-12 audiences. Graduate students listed a third significant motivating factor, which was the opportunity to improve teaching skills. Regarding factors that hindered participation, both faculty and students listed the same top barriers: a lack of time due to other priorities and a lack of information about outreach opportunities. Faculty also listed a lack of value to the department as a third barrier, citing research and teaching as their primary responsibilities and an institutional rewards system in which outreach was not highly valued. A more recent study examined faculty participation in community-engaged research at the UCLA Clinical and Translational Science Institute (Chung et al., 2015). They identified the following top five barriers: career development awards to protect time, convenience of learning opportunities, pilot grants, improved access to community partners, and faculty promotion criteria. If institutions want to elevate engaged scholarship, understanding the barriers and the motivators is critical.

Institutional Factors

Higher education in the United States evolves to meet the needs of students, faculty, and society. The rise of the land-grant universities came at a time when many institutions were learning how to best serve their communities; however, the latter half of the 20th century saw the rise of the research-intensive institution. A casualty of this shift was “the scholarship of application was devalued as disciplinary or basic research became the standard of practice for faculty promotion and rewards” (Glass & Fitzgerald, 2010, p. 10). Decades passed in which institutional structures adapted to support and reward research and teaching functions while engagement was minimized. Though service to society never left the mission statements of higher education, it largely became the third wheel. Any engagement structures were tertiary to the larger priorities of the university. The impact was that many faculty

adapted their individual focus towards research and teaching. Since systems of rewards and promotions were heavily weighted on those missions, they garnered the majority of faculty time and attention. Those who had goals or desires related to community engagement and service were often left to practice such activities as supplementary work and often without recognition of the scholarly merit.

The impact of *Scholarship Reconsidered* (1990) and other key discussions were critical in turning the tide and bringing a renewed focus to the third mission of service and engagement. This change was accomplished by not only recognizing the need for higher education to partner with the community in order to learn together and solve societal issues, but also by defining how the service mission was intimately connected to scholarship, that scholarship was not limited to the functions of research and teaching. Boyer's pioneering work reexamined how all three missions of higher education were closely integrated and valuable forms of scholarship. Higher education was prompted to "return to its roots" as discussed earlier (Kellogg Commission, 1999). Over a quarter of a century has passed since Boyer's call to reconsider scholarship. As the *Handbook of Engaged Scholarship* described, "During the past twenty-five years, repeated efforts have been made to stimulate American higher education to more actively engage with society" (Glass & Fitzgerald, 2010, p. 9). Many changes have been made to engagement policies, practices, and institutional structures. Much discussion and research has been advanced on issues such as the impact of the Carnegie engagement classification on higher education, the role of institutional leadership, the promotion and tenure issues faculty face, and the processes that support university and community partnerships. Not all of these issues have been settled. The following is a discussion of some of major issues regarding institutional structures and policies.

Response to the Carnegie Foundation

The impact of the Carnegie Foundation’s Community Engagement Elective

Classification has been one of the main catalysts driving many institutions towards policies that support faculty engagement. Though the classification is an elective and voluntary process requiring extensive documentation from each applicant, 361 U.S. institutions have received the designation as of 2015. That number is likely to grow over the coming years. The laborious application process requires each school to affirm that “a university or college has institutionalized engagement with community in its identity, culture, and commitments” and “the practices of community engagement have been developed to the extent that they are aligned with the institutional identify and an integral component of the institutional culture” (Driscoll, 2009, p. 5). The Carnegie process demands that institutions move beyond the rhetoric of engagement as simply being a talking point for political and community support to putting the words into practice. As such, the classification process has guided institutions to develop and rethink the internal structures that support faculty engagement on campus.

The Carnegie documentation framework requires two main components to be addressed: Foundational Indicators (identity and culture, commitment) and Categories of Community Engagement (curricular engagement, outreach and partnerships). Both must be supported with documentation that provides evidence of engagement. Driscoll (2009) noted during a review of 2006 applicants that “a number of institutional representatives reported that the process of documentation revealed both gaps and strengths, often motivating renewed development or internal recognition” (p. 9). The process showed institutions where additional support is needed as well as areas of strength that should be promoted and leveraged by faculty. In describing its pursuit of the classification during the first wave of

institutions, leaders at NC State University said, “Pursuing this elective classification stimulated intense discussion across campus about NC State’s commitment to community engagement and the process generated a new energy for greater investment by the colleges and units” (Zuiches, 2008, p. 45). The classification is serving as the impetus for systems change across many campuses, spotlighting processes that work as well as those that need more development. Driscoll’s (2009) review revealed three main areas in need of further development: assessment of community engagement, promotion and tenure policies, and communication and collaboration with community. All of these are critical support processes needed to aid faculty engagement.

Institutional Culture

Every institution has an organizational culture established and sustained by recognizable practices and actions that speak to the core values the organization holds as part of its identify. Vogelgesang et al. (2010) defined this aspect as such: “The organizational culture is a set of understood values, beliefs, and taken-for-granted assumptions shared by actors in a given community” (p. 441). This culture communicates meaning and expectations to its members and units. In higher education, the primary actors are faculty who learn from the culture and typically adapt their practices to meet the expectations. Even if service and engagement are part of the mission, if institutional values, practices, and structures are not in place to support these activities, they are not going to be a part of the culture. The perception of the culture is going to guide faculty behaviors. Jaeger and Thornton (2006) found, “The constructed perception of public service stands as a greater barrier to faculty involvement than actual policy and practice” (p. 361). Demb and Wade’s (2012) faculty survey speaks to this perception issue and reveals some of the conflict. While they found that 85% of faculty

agreed that participation in engagement activity was part of the university mission, faculty reported support from within their disciplines, departments, and universities was lacking. In discussing the implications, they noted, “Institutions seeking substantial participation by faculty need to make those intentions clear through mission statements, reward system criteria and infrastructure support that either provides resources or helps create efficiencies of time” (pp. 362-363). For engagement practices to flourish, the culture of engagement must be established in perception as well as practice.

The Carnegie Community Engagement Classification is largely considered the current driving force to help institutions establish an engagement culture on campuses. Ward et al. (2013) noted, “Campuses that achieve the classification have undergone shifts in institutional culture that have led to change such that community engagement is both deep and pervasive” (p. 296). Even prior to the establishment of the Carnegie framework, however, others laid the foundation of what an engaged campus looked like. Holland (1997) developed a matrix identifying seven organizational factors based on data from multiple studies: organizational mission; promotion, tenure, and hiring procedures; organizational structure; student involvement; faculty involvement; community; and campus publications. She later added three additional factors: leadership, policy, and budget allocation (Holland, 2005). The work of the Kellogg Commission (1999) was also critical to describing what the engaged institution looked like. The Commission developed a seven-part test that reinforced Holland’s work and included the following characteristics: responsiveness to the community; respect for partners; academic neutrality; accessibility; integration of engagement into mission; coordination; and resources adequacy. These factors eventually developed into the Carnegie framework described earlier.

If engagement scholarship is to grow deeper roots, it needs to be aligned at the core of the institution. In order for meaningful changes to take place in higher education, changes need to be institutionalized:

Institutionalization is not about finding ways to fit community engagement into the existing higher education system; rather it is about transforming the culture of higher education so that it embraces the epistemologies and forms of scholarship that allow community engagement to thrive. (Fitzgerald et al., 2016, p. 247)

It must be more than ancillary support for research and teaching and become integrated with those functions. Whiteford and Strom (2013) noted, “Engagement must be more than a set of activities; it must represent a fully institutionalized approach” (p. 79). For those institutions just now moving towards a culture of engagement, reviews of previous Carnegie applicants reveal it is a complex process that “challenges the dominating operating system of higher education” (Saltmarsh, Giles, Ward, & Buglione, 2009a, p. 34). It takes time, commitment, and intentionality to stay the course. Institutions able to adapt to the changing climate and create a culture in which engaged scholarship is a mutually beneficial endeavor for faculty and society that is aligned with research and teaching will be positioned to lead the integrated scholarship of the 21st century. Saltmarsh (2017) discussed four key areas of practice in need of continued development, identified based on the 2015 cycle of the Carnegie Foundation’s Community Engagement Classification: assessment, reciprocal partnerships, faculty rewards, and integration and alignment with other institutional initiatives.

The Committee of Institutional Cooperation is another example of how institutions are striving to understand the issues of the scholarship of engagement. This committee is a consortium of the Big Ten athletic conference universities and includes large, world-class

research institutions, many of which are land-grants (Committee on Institutional Cooperation Committee on Engagement, 2005). This consortium formed a special Committee on Engagement which defined the term as such:

Engagement is the partnership of university knowledge and resources with those of the public and private sectors to enrich scholarship, research, and creative activity; enhance curriculum, teaching, and learning; prepare educated, engaged citizens; strengthen democratic values and civic responsibility; address critical societal issues; and contribute to the public good. (p. 2)

Of late, the term “community engagement,” as described earlier by the Carnegie Foundation and their elective classification, seems to have risen as the current standard. The key themes throughout the recent discussions have focused on university-community partnerships that not only contribute to scholarship, research, and teaching activities, but also address social and civic responsibilities and issues that mutually benefit the institutions and the public.

Role of Institutional Leadership

As with most education initiatives, the role of leadership is critical. Chambers and Gopaul (2010) noted, “Leadership within higher education institutions that sets a tone for how engaged scholarship and other forms of social engagement are valued and aligns with the institution’s mission is essential to establishing a culture of engagement on any campus” (p. 65). Research has shown that institutional commitment has a positive effect on community engagement and engaged scholarship (O’Meara, 2002). The commitment must begin at the top levels and include more than rhetoric. Chief university officers are “the public and internal institutional faces, and their voices matter as indicators of sincerity in

institutional commitment and identity" (Sandmann & Plater, 2009, p. 14). Leaders set the tone with words and actions and impact policies that include everything from hiring to tenure to funding. Weerts and Sandmann (2008) found leadership was critical in two primary domains: communicating the value of engagement internally and externally in addition to aligning administrative resources and structures to promote engagement. If leaders adopt an attitude of accommodation rather than transformation, their actions are essentially excusing faculty members from true engagement. They must lead by example because "by engaging themselves, leaders engage their whole institution" (p. 15). For engaged leadership to succeed, leaders must establish this tone and institutionalize engagement.

The Carnegie Foundation recognizes the importance of leadership during the Community Engagement classification process. One application question asks, "Does the executive leadership (President, Provost, Chancellor, Trustees, etc.) of the institution communicate explicitly to promote community engagement?" (Carnegie Foundation, 2018). Allocation of resources and support are critical ways leaders establish and advance engagement in the university. As such, the Carnegie Foundation (2018) also asks, "Does the college have a coordinating infrastructure (center, office, etc.) to support and advance community engagement?" The reviewers want to see at what levels and through what processes institutions have established this infrastructure, as well as the reporting structure and oversight that should be coordinated and integrated throughout all levels of leadership.

One key challenge for institutional leaders is understanding the language of engagement, which is very diverse and different from the traditional ideas of service. Typologies of publicly engaged scholarship can help leadership understand the kinds of activities and the types of engaged scholars so they may move beyond the rhetoric of

engagement to tangible examples and support structures (Doberneck et al., 2010). If proper data is collected, the typology “may serve as the basis for institutional leaders to communicate with external stakeholders about the myriad ways faculty members collaborate with community partners to improve the world around them” (p. 29). A deeper level of understanding from leadership sets the stage for institutional support.

Another challenge for leadership is establishing an infrastructure that will last the test of time. Institutions should ask the question, “How do leaders advance engagement beyond their own terms in office?” (Sandmann & Plater, 2009, p. 22). Leaders want to put their own style and influences upon engagement, but they should seek to institutionalize the practices and build a culture that will last. This idea is important given that the turnover frequency for key leaders is between five and seven years. The goal is to deeply ingrain the values of engagement into the mission of the institution, so it will become a permanent focus that future leaders may build upon. Good leadership recognizes that to sustain these values, the practices and policies of engagement need to be established, promoted, and supported for many years. Community engagement will be institutionalized when “the actions are so pervasive—so habitual—that their withdrawal would be painful” (p. 23). That is the goal of engaged leadership.

Promotion and Tenure Issues

Faculty work should be framed in the context of an institution’s mission. As such, all faculty work, including research, teaching, and service, should be properly assessed and rewarded. This message is one of the biggest challenges for engaged scholarship. Boyer (1996) zeroed in on the problem over twenty years ago:

Almost every college catalog in this country lists teaching, research, and service as the priorities of the professoriate; yet, at tenure and promotion time, the harsh truth is that service is hardly mentioned. And even more disturbing, faculty who do spend time with so-called applied projects frequently jeopardize their careers. (p. 18)

The scholarship of engagement is by definition broad and integrated, yet the majority of promotion and tenure guidelines are compartmentalized (Ward, 2003). If the institution believes in the work of service and engagement, it should be properly rewarded. Holland (1997) noted, “The most common factor cited by the case study institutions as critical to expansion of service learning was a faculty reward system seen by faculty as compatible and consistent with the institutional expectation for involvement in service” (p. 35). Though service learning is only one form of engaged scholarship, that theme resonates throughout faculty engagement work. A major facet of this discussion is that even when engagement is promoted at the top levels of the university, on disciplinary or departmental levels the message may not be the same. One study focused on scientists found faculty “were unanimous in their belief that extensive outreach involvement was generally not possible or appropriate for untenured faculty” (Andrews et al., 2005, p. 287). Ellison and Eatman (2008) noted, “Departments, and the units with which they interact, are where tensions arise about the value of publicly engaged scholarship at the point of promotion and tenure” (p. v). Many faculty who are interested in engagement are keenly aware of the lack of value to their departments, a particularly salient point for untenured faculty.

The issues regarding promotion and tenure are major stumbling blocks to the advancement of engaged scholarship. Rice (1996) notoriously described the tenure process for engaged scholars as akin to “archery in the dark” (p. 31). McDowell (2003) noted that

disagreements over evaluating and accrediting extension scholarship is so great that some land-grant institutions have a different tenure system altogether for scholars with predominantly extension appointments. Glassick et al. (1997) summarized, “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). The lack of recognition for engaged scholarship is a roadblock, despite any rhetoric promoted in mission statements. If promotion and tenure policies are not changed to reflect all forms of scholarship, engagement practices will never be instilled as part of the institutional culture. Changes may mean a redefinition of what institutions consider a ‘publication’ or who a ‘peer’ is (Saltmarsh et al., 2009a). Fitzgerald, Allen, and Roberts (2010) discussed the problems with tenure policies that only look at peer-reviewed disciplinary journals, particularly when considering university-community partnerships. Those kind of collaborations “require a broader definition of a product” and the community “will ultimately be more impressed with a useful technical manual or set of policy recommendations than they will with a disciplinary publication” (p. 15).

Suggested policy changes for engaged scholars include a recommendation for the use of portfolios in the tenure dossier and an expansion of the continuum of scholarly artifacts (Ellison & Eatman, 2008). Since 2010 the Campus Compact has hosted the Faculty Rewards Institute at the annual Eastern Region conference (O’Meara, Eatman, & Petersen, 2015). They offer five key issues as a template for reform: the need to value, define, describe, and differentiate community-engaged scholarship; the need to identify criteria for evaluating community-engaged scholarship; the need to consider what constitutes documentation and evidence; the need to make peer review more inclusive; and the need to value local impact.

Ward (2003) concluded, “Unless and until faculty members can pursue external service without jeopardizing their jobs and stature, faculty will be unlikely to extend themselves to realize administrative calls for an engaged campus” (p. 125). Without these types of change, engaged scholarship may simply remain supplemental and never truly become part of the culture of the institution.

Sobrero and Jayaratne (2014) conducted a study that highlighted the scholarship perceptions of department heads at NC State University, a large land-grant institution. In 2010 they surveyed the 64 department heads at the university to determine the perceptions about the role of community engagement scholarship in the promotion and tenure process. Among the key findings was that 75% of department heads say they value community-engagement scholarship when making promotion and tenure decisions, and 73% of the departments include standards to reward community-engagement scholarship. They noted this was good progress for the institution since it developed and approved six realms of faculty responsibility for documenting scholarship in 2000, which included a focus on service, extension, and engagement. They did note, however, that 20% of the departments had no expectations for community engagement scholarship, that community engaged participatory research was not highly valued, and that department heads are not likely to promote faculty who publish in peer-reviewed community engagement journals. The authors credited the university’s development of procedures and policies to support community engagement scholarship, but full implementation is not complete, and some departments still lack understanding of the differences between service and engagement.

A recent study from Doberneck (2016) highlighted both the progress that has been made in the last twenty years as well as the work that remains in regard to promotion and

tenure policies. She examined the policies the 15 institutions that comprise the Consortium for Institutional Cooperation, the academic counterpart of the Big Ten Athletic Conference. The results revealed that 11 of the institutions continue to use the word ‘service’ rather than ‘engagement,’ with only four distinguishing the differences in service to the university, the discipline, or the community. Even today there is little congruence in language. In addition, she found that the types of outreach and engagement varied, and very few policies included standards for quality and excellence. While noting some progress, Doberneck noted there is much work to be done to align promotion and tenure policies with outreach and engagement. One suggestion was that outstanding examples of scholarly engagement in promotion and tenure policies should be “identified, celebrated, and shared broadly, so that they may serve as exemplars” (p. 16). Efforts such as that would aid in changing the narrative and policies across institutions.

It should be noted some research does not conclude that lack of recognition and institutional value in regard to promotion and tenure will always deter faculty engagement. Abes et al. (2002) contrasted with some of the prior literature, suggesting the reward structure was not a significant factor in faculty’s use of service learning, concluding that internal motivations played a larger role. It should be noted this research did reveal reward structures were a strong consideration for untenured faculty at research institutions and could influence them to discontinue the use of service learning. Vogelgesang et al. (2010) noted, “This study’s findings suggest that faculty commitment to community can transcend a non-conducive reward structure” (p. 467). There are indications that some personal characteristics and values can overcome the lack of institutional support and be powerful determinants in whether faculty choose to engage. They also found that perceived institutional commitment

to engagement, however, plays a significant role in predicting community engagement practices. Though some individuals may practice engagement regardless of the institutional value, to achieve a campus-wide identity of engagement, processes such as promotion and tenure must be addressed.

Institutional Support Structures

Another way leadership strengthens faculty engagement is through internal support networks. Unfortunately for many institutions, “community-engaged faculty and future faculty members are often left to piece together their own community-engaged scholarship career development with little institutional support” (Gelman et al., 2012, p. 22). Ellison and Eatman (2008) noted, “Research universities often lag in developing the intellectual frameworks, policies, and infrastructure to support academic public engagement” (p. xii). Without this support structure, engaged scholarship will continue to hold a tenuous position on campuses. Campbell and O’Meara (2014) studied faculty agency factors and found, “Professional development resources influenced faculty agency in career advancement” (p. 67). If institutions support the scholarship of engagement, then investment in professional development is an important way to facilitate these activities and provide faculty with the pathways to success.

The professional development, however, needs to be effective and sustainable. Welch and Plaxton-Moore (2017) recently completed a conceptual review of refereed journal articles and a survey of campus centers for community engagement. The six content areas that emerged as the primary focus of this development included the following: reflection, course development, principles of community engagement, syllabus development, assessment, and establishing/maintaining community partnerships. The criticisms they cited

included a lack of connection to community outcomes, the short and static nature of the workshops, the lack of sustained and continued professional education, and the need for better assessment. Perhaps the most profound criticism was, “We do not have an adequate sense that faculty development is, in fact, effective or whether the knowledge and skill sets are actually implemented or done so effectively” (p. 154). While faculty development is a very important approach, it is critical that work be done to assess the impacts and outcomes of these programs.

Gelmon et al. (2012) evaluated the results of one faculty development charrette attended by 20 university teams and found three keys to community engagement support: external funding, ongoing support beyond a one-time offering, and a set of standard curricular tools. Professional development alone, however, will not be enough if the values of engagement are not institutionalized. A case study of a community-engaged scholarship faculty development program at NC State University found three main tensions: a lack of funding support, conflicts in promotion and tenure policies, and a problem with faculty commitment (Jaeger, Jameson, & Clayton, 2012). The faculty commitment tension was the perception that engagement is an “add-on” and not an integral part of their work.

An interesting debate in regard to support structures is whether institutions should have a centralized office of support, such as an office of outreach and engagement. Some research found it is critical for institutions to take this step. Antonio et al. (2000) said, “Our findings also suggest that the mere presence of a community service center on campus probably fosters an institutional culture that supports service” (p. 390). The staff and resources from a center may provide faculty the support and resources they need to be more engaged. Michigan State University has been an example of a land-grant university using this

model with its Office of University Outreach and Engagement (Fitzgerald, Van Egeren, Bargerstock, and Zeintek, 2016). They note, “UOE’s role is to implement activities that promote institutional alignment for engagement to ensure that community-engaged scholarship is high quality, recognized, and identified by community as necessary, applicable, and valuable” (p. 47). Weerts and Sandmann (2010) examined examples of centralized support through the theory of boundary-spanning roles. Boundary-spanners are described as people who serve as a bridge, helping navigate the complex pathways from the university to its external partners, helping facilitate community engagement across four distinct roles described as community-based problem solvers, technical experts, engagement champions, and internal engagement advocates.

There can be a danger, however, in relying too heavily on a centralized approach or boundary-spanners. Lynton (2016) warned, “University outreach cannot be largely limited to peripheral, non-academic units with little or no faculty involvement” (p. 38). Demb and Wade (2012) also cautioned, “The establishment of a specialized office may create a ‘that’s what they do over there mentality’ and limit the degree to which others on the campus accept personal responsibility for developing engagement initiatives” (p. 342). If faculty rely on a centralized office to lead engagement efforts, a true culture of engagement may not be created across campus. Colbeck and Wharton-Michael (2006) described this as the machine model in which the division of labor is subdivided in order to deal with complexity. They advocate for a professional model in which “faculty who engage in public scholarship recognize that their academic work is a whole cloth, with threads of service, research, and teaching” (p. 18). The whole cloth approach creates a culture in which all the core missions are working together. Research has found that for some land-grant institutions, the center-led

model created programs that were “typically enclaved and isolated from the traditional research and teaching functions of the campuses” (Weerts & Sandmann, 2008, p. 90). Urban universities were found to have engagement more diffused and integrated throughout the institution. Jaeger and Thornton (2006) warn of a similar danger of moving toward a more dichotomous faculty in which there are “those who conduct public service and those who do not” (p. 363). This concern is particularly salient for land-grants that may have faculty solely engaged in cooperative extension and other service activities, possibly creating a faculty structure of the haves and have-nots and developing greater tensions and imbalances within the institution.

As discussed earlier, one challenge that is critical to supporting engagement but lacking in many institutions is how to best evaluate and assess faculty engagement work. This problem is directly connected to the promotion and tenure issues previously discussed. Many institutions do not know how to give proper value to engagement activities. Systems used to assess traditional publications and academic peers do not provide the same kind of analysis needed to evaluate engagement. Furco and Miller (2009) emphasized the importance of assessment processes in measuring and benchmarking engagement activities from the first Carnegie applicants. Instruments are needed not only to evaluate the types and levels of engagement, but also to provide frameworks and action plans for institutionalizing engagement across campus. Traditional forms of scholarship have common forms of assessment, be they journal articles, books, reports, measures of student outcomes and other forms of peer review. Cox (2006) noted, “Documentation makes scholarship visible” (p. 130). Engaged scholarship, however, faces unique assessment challenges, often related to the complex relationships with the community.

The Carnegie classification is actually an assessment tool being used by many institutions to evaluate commitment to engagement. Additional tools and evaluation resources are needed, especially at departmental levels. Institutions that have been committed to engagement for many years, such as Michigan State University, are ahead of the assessment curve. Their Office of Outreach and Engagement has developed and used the Outreach and Engagement Measurement Instrument (OEMI) since 2004-2005 (Lunsford, Church, & Zimmerman, 2006). The OEMI helps faculty document their engagement work, which helps the institution collect data needed to analyze the impact and support of engagement. The university notes, “The OEMI helps units direct their outreach work in ways that create synergy among individual faculty efforts to yield significant impact on individuals and organizations beyond the academy” (pp. 97-98). This kind of assessment is needed for both the individual faculty member and the department. Instruments such as the OEMI help bring new levels of understanding regarding engagement scholarship in the community. Assessment can be messy, especially given the complex relationships of community partnerships. Evaluation and assessment must not only consider the needs of the campus, but also the needs of the external partners. Holland and Gelmon (1998) said, “Effective partnerships require a shared commitment to ongoing, comprehensive evaluation from the earliest stages of the relationship” (p. 107). Additional research and advancement in this area are needed to improve engagement practices across the nation.

University-Community Engagement

Boyer’s (1990) pioneering work emphasized the civic mandate of higher education and the responsibility to society. Boyer originally referenced the scholarship of application. Since then, the discussion has shifted to the scholarship of engagement rather than

application. The distinction is the language of ‘application’ implies the knowledge flows in one direction, from the university to the community. Reciprocity reframes the relationship and “signals a shift in campus-community partnerships towards relationships that are defined by multidirectional flow of knowledge and expertise between campus and community” (Saltmarsh et al., 2009a, p. 27). Engagement scholarship is a two-way street and should be mutually beneficial. Byrne (1998) said, “Engagement involves transfer in two directions: a partnership of exchange between the university and its constituents” (p. 55). He described engagement not just as outreach but ‘inreach’ into the university. Universities must know their communities and partners well and work side-by-side on a level playing field in which both contribute to the work. While universities may have little control over communal factors in a partnership, “recognizing that communal factors importantly affect faculty engagement honors the theoretical underpinnings of engagement as a two-way street” (Demb & Wade, 2012, p. 342). This way of conceptualizing engagement partnerships is a significant change for traditional research universities.

A challenge for many institutions attempting to move towards structures that support engagement is they are not quite sure how to achieve this reciprocity. Driscoll (2008) described the difficulty of this task in a review of the first applicants to Carnegie’s classification: “Most institutions could only describe in vague generalities how they had achieved genuine reciprocity with their communities” (p. 41). Examples of engagement done ‘to’ or ‘for’ the community are easier to describe than those done ‘with’ the community. Saltmarsh (2017) advocates for a goal he called the “public engagement regime” in which “academic work is done with the public; there is shared authority for knowledge generation and co-creation of knowledge and problem-solving that values relational, localized,

contextual knowledge” (p. 10). Part of this challenge may be related to a conceptual framework that Enos and Morton (2003) described as transactional versus transformational partnerships. Transactional partnerships involve an exchange of goods or services and may be mutually beneficial for both the university and community; however, they don’t produce deep change. On the other hand, transformational partnerships “involve deeper commitments and expectations of shifts of identities and values, challenge norms and systems, and focus on outcomes that extend beyond mutual benefit to mutual growth and change” (Jaeger et al., 2012, pp. 150-151). Engagement that is reciprocal is best described as transformational rather than transactional.

To achieve this kind of reciprocity requires sincere effort to develop partnerships that are two-way streets of learning and communication. Too many times, communities have been treated as “pockets of need” or “laboratories for experimentation” (Bringle & Hatcher, 2002, p. 503). Morton (1995) observed partnerships are often rooted in charity rather than justice. Charitable partnerships are more in the mold of the one-way street or transactional type in which resources are given from the campus to the community. Justice relationships are more likely to be transformational, as resources are shared, and knowledge is co-created. Weerts and Sandmann (2008) found research-based institutions and land-grants with a history of a more traditional and unidirectional outreach have difficulty institutionalizing a more constructivist, multidirectional flow. The language of the Carnegie engaged institution, however, advocates for the more collaborative partnership, a structure that is challenging for many institutions.

Another challenge is these relationships require both sides to understand cultural differences, which often means different ways of creating knowledge and solving problems

(Bringle & Hatcher, 2002). In some cases, this means defining who the ‘community’ is so the university is not applying some stereotyped view (Holland & Gelmon, 1998). It requires time to develop these relationships, build trust, and understand the complexity of the situation. Part of building trust is also recognizing any imbalances in power sharing and working toward governance structures where all stakeholders have a voice (Weerts & Sandmann, 2008). Approaching partnerships from this perspective provides better understanding of the dynamics of the relationship. Bringle and Hatcher (2002) concluded, “Campus-community partnerships will be most meaningful and enduring when individuals conclude that each is contributing in a meaningful, effective manner to activities that have a positive impact on important civic and campus outcomes” (p. 514). These relationships seek to form a shared university-community culture that benefits all partners.

One of the more recent approaches to collaborative engagement is what is being called collective impact. Kania and Kramer (2011) defined collective impact as “the commitment of a group of important actors from different sectors to a common agenda for solving a specific social problem.” Collective impact stands in opposition to the isolated impact most commonly used in the non-profit sector, in which the success or impact of the work of single organizations is evaluated. The tenets of collective impact argue that social problems are best solved through collaboration and shared objectives. Kania and Kramer identified five conditions of success: a common agenda, shared measurement systems, mutually reinforcing activities, continuous communication, and backbone support organizations. The collective impact approach is one that lends itself well to collaborations between higher education institutions and community partners. Garber and Adams (2017) recently reflected on the collective impact of the University of Georgia Archway Partnership,

addressing each of those five conditions of success. The Archway Partnership was “established to foster the UGA land-grant mission by engaging the entire university on community-identified needs” (p. 9). The authors noted the success of the partnership as an affirmation of collective impact theory. In particular, they noted the importance of the university adding value as a backbone organization, providing organization and staff dedicated to the success of the initiative. Other key components of their success were practicing leadership development and creating a sustainable program. The strategy and approach of collective impact offer a hopeful new pathway for the role higher education can play in community engagement initiatives.

Summary

Faculty across this nation have a wide range of talent in research, teaching, and service or engagement work; however, for many years, institutions have not recognized or rewarded all three forms of scholarship. This imbalance is beginning to change as the discussion grows and more institutions acknowledge that faculty engagement is vital to connect the university to its community and society at large. Research is beginning to better understand engaged faculty and the factors that influence their engagement practices; however, there is still much to learn so institutions may better support, promote, and recognize community engagement.

Change occurs slowly in many systems, particularly those as large and entrenched as higher education. For many decades, the rise of the research university meant a decline in the mission of service, at least in regard to the scholarly value placed on the engagement activities. Despite over two decades of discussing the merits of the scholarship of engagement, there is still some resistance and debate regarding whether the movement is

faddish and will remain on the margins (Holland, 2009). Change has been slow in places and some still ask, “Will it last?” or “Will it die out?” (p. 86). However, prompted by Boyer, the Carnegie Foundation, and other engaged scholars and institutions, it appears the tide has begun to turn, and higher education is realizing the scholarship of engagement should be held in high regard. The institutional structures are beginning to change and develop in order to support faculty engagement as institutions realize the change “does not involve abandoning standards of evidence or rigor of inquiry” (Fitzgerald et al., 2012, p. 17). Whether it is its institutional culture or mission, leadership, promotion and tenure issues, faculty development, or other support structures, the university must adapt so engagement is central to the mission and not a marginal task. In the 21st century, the society and community are beginning to demand reciprocity and collaboration with higher education; the days of the ivory tower not engaged with the local community appear to be in decline, hopefully for the good of higher education and the public. Much has been learned about faculty characteristics and institutional support structures in the past two decades; however, the mission of engagement needs to be further advanced for the benefit of faculty, higher education institutions, and society.

CHAPTER THREE: METHODOLOGY

Introduction

The purpose of this study was to examine the relationships between higher education faculty members' personal characteristics, professional characteristics, and institutional factors in relation to the faculty members' values and practices regarding faculty engagement. This chapter outlines the design and methodology used to address the research questions posed in this study. The research is guided by the Faculty Engagement Model (FEM), a conceptual model developed by Wade and Demb (2009) based on a thorough literature review of faculty participation in engagement activities. The FEM includes three primary dimensions that frame the research agenda: the personal dimension (i.e. gender, age, race), the professional dimension (i.e. academic rank, tenure status, discipline), and the institutional dimension (i.e. institutional type, classification, mission, leadership).

This study applies the concepts of the FEM to a large, multi-institutional data set to see how the factors predict faculty engagement values and practices, with a particular emphasis on the understudied areas of discipline and institutional type. The model developed from this study contributes to a better understanding of the interactions amongst the dimensions and across diverse institutional types and better informs those institutions how to support faculty engagement in higher education. The research questions listed below guided this analysis. The first three questions examined the ability of personal, professional, and institutional factors to predict faculty engagement values and practices as separate dimensions. The final question utilized hierarchical linear modeling to address the integration of these dimensions in a multilevel analysis that includes both the faculty and institutional levels in one model. The research questions are:

1. What is the relationship between the personal faculty characteristics of gender, race, and age on the engagement values and practices of faculty members?
2. What is the relationship of the professional faculty characteristics of rank, tenure status, and departmental field on the engagement values and practices of faculty members?
3. What is the relationship of the institutional characteristics of institutional type and perceived institutional support of engagement on the engagement values and practices of faculty members?
4. What is the relationship of a faculty engagement model that includes personal, professional, and institutional factors on the engagement values and practices of faculty members?

This chapter provides detailed descriptions of the data set being used, the 2013-14 Faculty Survey collected by the Higher Education Research Institute (HERI) at the University of California, Los Angeles. Characteristics of the participants and institutions from this data set are shared. In addition, this chapter describes the research procedures and design, as well as the measures used for analysis. The procedures to use the proposed analytical method, hierarchical linear modeling (HLM), are fully described. Finally, a summary on the research methodology is provided.

Research Design Overview

This study utilized a quantitative paradigm to test the predictive power of existing models. As described earlier, Wade and Demb's (2009) Faculty Engagement Model (FEM) postulates that personal faculty characteristics, professional faculty characteristics, and

institutional characteristics influence faculty members' engagement beliefs and practices.

This study examined each of those three primary sets of factors using quantitative methods of analysis to model engagement values and practices.

The study design is considered non-experimental based on several key characteristics. There are areas of selection bias inherent in this study and data operating on both the individual and institutional level. In regard to the institutions, survey data was only collected from institutions that chose to utilize HERI's research services. This institutional self-selection does not allow for randomization and restricts inference and generalizability to the faculty members of these self-selected institutions. In addition, self-selection bias operates on the individual level within these institutions. While HERI encourages all faculty members of a participating institution to complete the survey, response rates were far less than 100%. In addition, individual faculty members have selection bias in the choice of discipline they choose to pursue as well as the institutions at which they choose to be employed. These choices are significant in a research study exploring issues of engagement, as faculty members may purposely pursue disciplines which encourage or limit engagement, depending on their personal interests or beliefs regarding outreach and service. In addition, faculty who wish to contribute to engagement activities may be more likely to choose institutions that significantly reward engagement activities, as opposed to faculty who may wish to focus on research and teaching alone.

A significant weakness of a non-experimental design is it is unable to find true cause and effect relationships as variables are not able to be controlled or manipulated. Non-experimental designs may rely on correlations that come from observations and interpretations of existing variables and data that occur naturally. A strength of this

methodology, however, is that researchers can conduct exploratory research that makes inferences about larger populations by sampling a small portion of the population of interest.

In addition, this study utilized a cross-sectional survey to answer the research questions. Survey research is a widely used methodology in educational research, particularly in non-experimental designs. It allows for the efficient collection of data during a limited time frame. Survey research lends itself to helping “describe trends in the data” and “learning about a population” (Creswell, 2012, p. 376). In addition, a cross-sectional survey collects data at one point in time and allows for the measurement of current attitudes or practices during that point in time. The survey used in this study comes from a large national dataset that is described fully in this chapter. The large sample size of this data set increases the strength of the analysis because the sample is more likely to “exhibit similar characteristics to the target population” (p. 381). One limitation of the survey methodology, however, is the data is self-reported and is unable to be verified by other means.

Instrument, Data Collection, and Sample

The following section outlines the survey instrument and data set used to address the research questions regarding faculty engagement. In addition, the sample that is used is outlined and some basic descriptive statistics of the sample are shared.

HERI Faculty Survey

This study utilized data collected by the Cooperative Institutional Research Program (CIRP) at the Higher Education Research Institute (HERI) located at the University of California, Los Angeles. The mission of HERI is “to inform educational policy and promote institutional improvement through an increased understanding of higher education and its impact on college students” (Higher Education Research Institute, 2017). The data collected

allows researchers and institutions to “foster institutional understanding and improvement.”

One of the surveys administered by HERI is a national survey of college and university faculty called the HERI Faculty Survey.

The Faculty Survey, as described by HERI (2017), “Provides institutions with a comprehensive, research-based picture of key aspects of the faculty experience.” It has been administered to over 1,100 two and four-year institutions since 1989. The HERI Faculty Survey is administered on a triennial basis and is designed to provide participating institutions with a research-based picture of the faculty experience. In addition to the demographic data collected by the survey, the instrument “Focuses on topics such as how faculty spend their time, how they interact with students, their preferred methods of teaching, their perceptions of institutional climate, their primary sources of stress and satisfaction, and their personal and professional goals” (Hurtado, Eagan, Pryor, Whang, & Tran, 2012, p. 2). The survey helps guide institutions in decisions regarding strategic planning, faculty development, assessment and accreditation, pedagogical practices, research and service activities, and other important issues regarding organizational success.

HERI presents results to participating schools with detailed reports that include institutional results aggregated by gender as well as comparisons with other similar institutions. Additional reports detail findings for full-time, part-time, and graduate faculty separately. Institutions also receive a monograph of the national results. HERI notes that institutions have typically used the results in strategic planning, faculty recruitment and retention, faculty development activities, assessment and accreditation, and discussions regarding pedagogy and student learning experiences.

The survey data used in this study comes from the 2013-14 HERI Faculty Survey and

was administered during that academic year. It was the ninth in the series of Faculty Surveys that HERI has administered since 1989. In addition to the survey topics described earlier, this instrument includes survey items related to individual faculty members' service and engagement as well as items that address institutional support for engaged scholarship. These variables and constructs are outlined later in this chapter. A complete copy of the 2013-14 HERI Faculty Survey is included in the Appendix.

HERI Data Collection

Higher education institutions across the United States had an opportunity to take part in the 2013-14 HERI Faculty Survey. Participation did require a fee from the institutions. Those who chose to participate were encouraged to sample their entire faculty in order to ensure that the data would be representative of their faculty population, though historically they have focused on full-time undergraduate teaching (FTUG) faculty. The HERI data includes faculty from two sources: participating institutions and supplemental responses from faculty at non-participating institutions. HERI solicited supplemental responses from randomly selected faculty and from faculty who had previously responded to the 2010-11 HERI Faculty Survey.

The 2013-14 Survey was administered using a web-based questionnaire based on items used in the eight previous questionnaires. The items were revised based on the suggestions of "HERI-affiliated researchers actively studying faculty concerns and topics related to teaching and learning" (Eagan et al., 2014, p. 2). Individual faculty members were invited to complete the survey through a secure web link connecting them to the HERI portal. HERI maintained the security and privacy of the data collection. In addition to the demographic information and questions included in the primary survey, the questionnaire

allowed institutions to ask their faculty up to 30 locally-designed, closed-ended questions, and five open-ended questions.

HERI used norms sample criteria to weight the data and provide a normative picture of the American full-time undergraduate faculty. They considered all institutions of higher education that admitted at least 25 first-time full-time students and granted a baccalaureate-level degree or higher. The norms criteria required a minimum response rate of 35% of FTUG faculty from participating four-year colleges and 20% from participating universities. HERI did not apply the standard method of inclusion for the supplemental responses as those were based on individual respondents rather than all the faculty from an institution. For those in the randomly selected population, only FTUG faculty from institutions with 10 or more responses were included in the norms sample. Initially 24,934 respondents at 289 colleges and universities returned survey forms to HERI for the 2013-14 academic year. This included 22,422 submitted surveys from participating institutions, 747 randomly-selected faculty, and 1,765 from a supplemental sample of prior respondents. Participating institutions had a participation rate of 36.9%, as compared to 12.9% for randomly selected faculty and 20.9% for prior respondents.

In addition, only full-time undergraduate faculty were included in the normative data. This study defines ‘faculty member’ as described in the HERI analysis: “Any employee of an accredited four-year college or university who spends at least part of his or her time teaching undergraduates” (Higher Education Research Institute, 2017). The survey was administered to part-time faculty as well; however, that data is not considered in the current study. While this study recognizes that part-time faculty are sometimes involved in service and

engagement work, they generally do not have the same campus responsibilities as full-time faculty and are often not as immersed in the campus climate and community.

Targeted Sample for Study

HERI supports and encourages research and scholarly inquiry using the data maintained at the Institute. Datasets available to scholars outside of HERI are only those that are three years old or older. Gaining access to data from the 2013-14 HERI Faculty Survey requires an application process and a qualifying proposal. The short proposal must include an overview of the proposed study including the purpose, research questions, method of analysis, and dissemination plans. HERI does not typically provide access to the complete dataset, so in addition to the proposal, the application requires a copy of the data access variable list needed to complete the research project of any applicant. The proposal submitted for this research requested 66 variables from the HERI Faculty Survey representing a number of personal, professional, and institutional factors that may influence faculty engagement.

HERI provides access to a subset of the complete faculty survey dataset. This study proposal requested the subset only include faculty of an accredited four-year college or university who spend at least part of his or her time teaching undergraduates. The targeted data does not include part-time faculty. This targeted sample was able to be achieved by a survey item which asked, “Are you considered a full-time employee of your institution for at least nine months of the current academic year?” The targeted sample was delimited to faculty who only responded “Yes” to this item. The targeted sample provided by HERI for this study includes 17,145 faculty members from 293 unique four-year colleges or universities.

Analysis and Study Measures

This study investigated the impact of three dimensions from the conceptual Faculty Engagement Model (FEM) developed by Wade and Demb (2009) hypothesized to impact faculty engagement values and practices: the personal dimension, the professional dimension, and the institutional dimension. The latest edition of the FEM included a fourth dimension described as communal. It was not considered in this study for two reasons: the first was that the communal factors are not adequately measured by the HERI Faculty Survey; in addition, the model was revised based upon another survey given to only one land-grant institution. This study examined the first iteration of the FEM across multiple institutions and types. It should be noted the original model included several factors from the new communal dimension under the professional dimension, including discipline. For this analysis, the factor of discipline/department was considered a part of the professional dimension. The following section discusses the analytical methods, variables, and constructs used as predictors in this engagement model as well as the dependent variables.

Hierarchical Linear Modeling

A large percentage of the educational research that utilizes quantitative analysis makes use of linear regression methods to model the relationship between the variables of interest. The majority of linear regression analyses use ordinary least squares (OLS) as the standard approximation method. OLS estimates the relationship between one or more independent variables and the dependent variable in order to calculate a line of best fit. One of the key assumptions of OLS is the assumption of independence, meaning there is no autocorrelation, or the error from one observation is independent from the error of another observation.

This assumption of independence is one that many social science research studies, particularly educational studies, fail to address. In educational research, people are often clustered into groups such as a specific class, school, district, university, etc. This clustering can violate the OLS assumption of independence: “Once people start having similar characteristics based on group membership, then the assumption of independence is violated. If you violate it, you get incorrect estimations of standard errors” (Robson & Pevalin, 2016, p. 8). When individuals are clustered within the same organizing unit, they are more likely to have a degree of correlation or relatedness due to these group-level factors. Ignoring this relatedness and using OLS models on data better suited to multilevel modeling may lead to an underestimation of standard errors, thereby increasing the likelihood of results being statistically significant. This in turn can lead to a Type I error in which a null hypothesis may be rejected when it should not.

The analytical method suggested to address this issue of group level factors is multilevel or hierarchical linear modeling (HLM). HLM is a method of multilevel modeling that accounts for hierarchical, or nested, levels of data. It may include units that are nested, or grouped, within units of another level. Multilevel models often have a large number of terms. A strength of using this analytical approach is explained by Umbach (2007): “Using HLM overcomes the problems associated with complex multilevel data by simultaneously estimating equations for both individual and institutional effects” (p. 283). In discussing how the use of multilevel regression analysis has come into favor with researchers in the social and behavioral sciences, Bickel (2007) stressed the importance of understanding contextual effects and the ability to acknowledge the effect of independent variables at the individual level and one or more contextual or group levels. In promoting the use of this form of

analysis he noted, “The possibility of individual-level effects and contextual effects in the same analysis is one compelling reason why multilevel modeling has become so conspicuous” (p. 3). In many ways, the conceptual understanding of HLM is intuitive, as researchers recognize that not only do individual characteristics influence some dependent variable, but cultural or organizational characteristics have an impact as well.

Multilevel or HLM models may include two or more levels. In educational research, they often include two levels; the first one that accounts for measurements at the individual level (i.e. student or faculty members), and the second level accounts for measurements at the school level. In essence HLM “may be thought of as specifying two levels of regression equations” (Cohen, Cohen, West, & Aiken, 2003, p. 148). At the first level, a separate regression equation is used to analyze the relationships within each of the groups. At level two, regression equations specify the relationships between group-level variables and the relationships within each group from the level one analyses. Bickel (2007) said, “Multilevel modeling can be usefully viewed as a better way of doing regression analysis under specific circumstances. The circumstances are those in which observations, such as students, are nested or grouped in identifiable contexts, such as classrooms, schools, and districts” (p. 8). Multilevel modeling is helpful because data nested within a group tends to be more alike than data from random individuals. This method helps researchers understand the nature of group dynamics and the contextual effects exerted on individuals. The methods of HLM were applied to this study’s analysis of faculty engagement values and practices.

The methods of hierarchical linear modeling provide a good approach to understanding faculty engagement values and practices through the lens of the Faculty Engagement Model because faculty members are nested within institutions and variables at

the two different levels are not independent. The models contain terms for predicting an expected faculty member's engagement values and practices on an individual level and terms for predicting the expected response on a group level. The first level of the model includes both personal and professional variables that operate on the level of the individual faculty member only; this first level does not consider group effects. Those individual variables include the following: gender, age, race, academic rank, tenure status, and departmental field. As described by Bickel (2007), the individuals are nested within the institution, which brings its own influences upon faculty engagement. Therefore, the second level of the model is the institution and its impact on faculty engagement behaviors, characterized by the variables of institutional type (Carnegie classification, public or private, HBCU) and measures of perceived institutional support.

This study generated two random-intercept models based on the dimensions of Wade and Demb's (2009) Faculty Engagement Model. One model is used to predict the civic minded values of faculty, and a second model predicts the civic minded practice of faculty. Random-intercept models are those in which the intercept is allowed to vary for each level two group, which in this case is each college or university represented in the data. Robson and Pevalin (2016) noted, "As there are as many intercepts as there are groups (there could be hundreds!), these cannot be represented as a single coefficient or value as in ordinary regression" (p. 22). A random-intercept model provides a better representation than the single intercept model used in ordinary least squares regression. Before describing the two models that are developed, the following describes the dependent variables in this study.

Dependent Variables

The HERI faculty survey includes a variety of items designed to assess faculty beliefs and practices related to engaged scholarship and service. This study examined two dependent constructs created by HERI that measure the Civic Minded Practices and the Civic Minded Values of faculty members. These two constructs serve as the dependent variables in the hierarchical linear models.

Civic minded practice. This construct is a unified measure of the faculty involvement in civic activities. The construct includes responses to the six items described in Table 3.1.

Table 3.1

Civic Minded Practice - Dependent Variable - Construct Items

Independent Variable Category	2013-14 HERI Faculty Survey Item	Response Options
Activity	During the past two years, have you engaged in any of the following activities? Activity: Advised student groups involved in service/volunteer work.	1 = No 2 = Yes
Activity	During the past two years, have you engaged in any of the following activities? Activity: Collaborated with the local community in research/teaching.	1 = No 2 = Yes
Instructional Method	In how many of the courses that you teach do you use each of the following? Method: Community service as part of coursework.	1 = None 2 = Some 3 = Most 4 = All
Hours Per Week	During the present term, how many hours per week on average do you actually spend on each of the following activities? Hours per week: Community or public service.	1 = None 2 = 1-4 3 = 5-8 4 = 9-12 5 = 13-16 6 = 17-20 7 = 21+
General Activity	Do you use your scholarship to address local community needs?	1 = No 2 = Yes
Past Activity	During the past two years, have you: Engaged in public service/professional consulting without pay?	1 = No 2 = Yes

It is hypothesized the personal, professional, and institutional measures will predict faculty engagement practices as measured by the construct of Civic Minded Practice. The descriptive properties of the Civic Minded Practice variable as constructed by HERI are in Table 3.2.

Table 3.2
Civic minded practice construct properties

Descriptive Statistic	Value
N	16,868
Mean	50.01
Median	50.06
Standard deviation	8.354
Minimum	36.97
Maximum	73.98

Civic minded values. This construct is a unified measure of the extent to which faculty believe civic engagement is a central part of the college mission. The construct includes survey responses to the six items described in Table 3.3.

Table 3.3
Civic Minded Values - Dependent Variable - Construct Items

Independent Variable Category	2013-14 HERI Faculty Survey Item	Response Options
Objective	Indicate the importance to you personally of each of the following: Influencing social values.	1 = Not important 2 = Somewhat important 3 = Very important 4 = Essential
Undergraduate Goal	Indicate the importance to you of each of the following education goals for undergraduate students: Instill in students a commitment to community service.	1 = Not important 2 = Somewhat important 3 = Very important 4 = Essential
Undergraduate Goal	Indicate the importance to you of each of the following education goals for undergraduate students: Encourage students to becomes agents of social change.	1 = Not important 2 = Somewhat important 3 = Very important 4 = Essential

Table 3.3 (continued)

View	Please indicate your agreement with each of the following statements: Colleges should be actively involved in solving social problems.	1 = Disagree strongly 2 = Disagree somewhat 3 = Agree somewhat 4 = Agree strongly
View	Please indicate your agreement with each of the following statements: Colleges should encourage students to be involved in community service activities.	1 = Disagree strongly 2 = Disagree somewhat 3 = Agree somewhat 4 = Agree strongly
View	Please indicate your agreement with each of the following statements: Colleges have a responsibility to work with their surrounding communities to address local issues.	1 = Disagree strongly 2 = Disagree somewhat 3 = Agree somewhat 4 = Agree strongly

It is hypothesized the personal, professional, and institutional measures will predict faculty engagement values as measured by the construct of Civic Minded Values. The descriptive properties of the Civic Minded Values variable as constructed by HERI are in Table 3.4.

Table 3.4
Civic minded values construct properties

Descriptive Statistic	Value
N	15,097
Mean	49.50
Median	49.48
Standard deviation	8.715
Minimum	28.1
Maximum	64.87

Construct Technical Report

A construct is an attribute of a person that cannot be measured directly, typically due to its complex nature, but may be assessed using other variables or indicators in combination with each other. In survey research, “A construct is the abstract idea, underlying theme, or

subject matter that one wishes to measure using survey questions" (SAGE, 2018). The Higher Education Research Institute (2017) defines a construct as such: "Constructs represent sets of statistically related items that measure an underlying trait or aspect of a faculty member's life."

Because constructs can be complex, it is important to know if the combination of items is valid. Does the construct actually measure the aspect we wish to measure or understand, rather than a collection of items that are not really related? Construct validity is most often analyzed using the techniques of Classical Test Theory (CTT). The Cooperative Institutional Research Program (CIRP) is part of HERI. When it comes to construct validity, the goal of CIRP is, "To create a set of statistically sound, educationally relevant constructs to be used by institutions and researchers alike" (Sharkness, DeAngelo, & Pryor, 2010, p. 2). As many of the HERI surveys are used across multiple years, CIRP wants to make sure they are using a set of measures that are constant across survey instruments and years. As such, CIRP uses Item Response Theory (IRT) rather than Classical Test Theory (CTT) to develop constructs. CIRP chooses IRT over CTT for several reasons: a person's 'true score' is independent of a set of items because the dimension of interest is assumed to influence but not define responses to specific items; score interpretation in IRT is more interesting and flexible than CTT; IRT allows for the possibility of different scales of standard errors of measurement (SEM), an approach that more realistically approximates how people respond to tests and surveys; and unlike CTT scale scores, which are context specific, IRT parameters are independent of sample characteristics and specific items.

CIRP uses a graded response model (GRM) to estimate the IRT parameters. Each item has a discrimination or slope parameter (α_i) which is an indicator of how well the item

taps into the construct of interest. The discrimination parameter is similar to factor loadings or item-total correlations. Each item also has a series of threshold parameters (β_i) that are equal to the number of item response categories minus one (k-1). Threshold parameters “can be interpreted as the points on the latent trait continuum (e.g. the ‘level’ of the trait) at which a respondent has a 50% probability of responding to an item in a certain response category or above and a 50% of responding in any other lower category” (Sharkness et al., 2010, p. 11).

Tables 3.5 and 3.6 provide the IRT parameters for the two dependent constructs of Civic Minded Practice and Civic Minded Values as reported in the CIRP report for the HERI Faculty Survey.

Table 3.5
IRT parameters for Civic Minded Practice items

Faculty Survey Item	α	β_1	β_2	β_3	β_4	β_5	β_6
Act: Advised student groups involved in service/volunteer work	1.33	0.27					
Act: Collaborated with the local community in research/teaching	1.87	0.18					
Instructional Method: Community service as part of coursework	1.64	0.76	2.15	2.93			
Hours Per Week: Community or public service	1.35	-0.39	1.88	2.98	3.72	4.18	4.75
Act: use your scholarship to address local community needs	1.78	0.33					
Past Act: Engaged in public service/professional consulting without pay	1.51	-0.30					

Table 3.6
IRT parameters for Civic Minded Value items

Faculty Survey Item	α	β_1	β_2	β_3
Objective: Influencing social values	1.31	-1.98	-0.16	1.63
Undergraduate Goal: Instill in students a commitment to community service	1.87	0.18		
Undergraduate Goal: Encourage students to become agents of social change	1.64	0.76	2.15	2.93
View: Colleges should be actively involved in solving social problems	1.35	-0.39	1.88	2.98
View: Colleges should encourage students to be involved in community service activities	1.78	0.33		
View: Colleges have a responsibility to work with their surrounding communities to address local issues	1.51	-0.30		

Discrimination parameters above 1.70 are considered very high, and those between 1.35 and 1.70 are high (Baker as cited by Sharkness et al., 2010, p.11). The full range of values for these parameters can be interpreted and described as outlined in Table 3.7.

Table 3.7
Interpretation of Values for Discrimination Parameters

Parameter Verbal Label	Parameter Range of Values
None	0
Very low	0.01 – 0.34
Low	0.35 – 0.64
Moderate	0.65 – 1.34
High	1.35 – 1.69
Very high	> 1.70
Perfect	+ infinity

As seen from Tables 3.5 and 3.6, the survey items used in the constructs of Civic Minded Practice and Civic Minded Values are all considered very high or high, except for one item in each construct that is on the top end of the moderate range of values.

Independent Variables: Personal (Level 1)

The HERI Faculty Survey included several personal demographics believed to influence faculty engagement beliefs and practices. The following personal measures in Table 3.8 were used as predictor variables and included in Level 1 of the multilevel models.

Table 3.8

Level 1 Independent Personal Variables: HERI Faculty Survey Items & Response Options

Independent Variable	2013-14 HERI Faculty Survey Item	Response Options
Sex	Your sex:	1 = Male 2 = Female
Year of Birth	Please enter the four-digit year or your birth	Respondent entered
Race/Ethnicity	Are you: (Mark all that apply)	White/Caucasian African American/Black American Indian/Alaska Native Asian American/Asian Native Hawaiian/Pacific Islander Mexican American/Chicano Puerto Rican Other Latino Latino

Independent Variables: Professional (Level 1)

The HERI Survey also included several professional demographics believed to influence faculty engagement beliefs and practices. The following professional measures described in Table 3.9 were used as predictor variables and included in Level 1 of the multilevel models.

Table 3.9

Level 1 Independent Professional Variables: HERI Faculty Survey Items & Response Options

Independent Variable	2013-14 HERI Faculty Survey Item	Response Options
Faculty Rank	What is your present academic rank?	1 = Professor 2 = Associate Professor 3 = Assistant Professor 4 = Lecturer 5 = Instructor
Tenure	What is your tenure status at this institution?	1 = Tenured 2 = On tenure track, but not tenured 3 = Not on tenure track, but institution has tenure system 4 = Institution has no tenure system
Aggregated Department	Derived from item: Department of current faculty appointment – General Area	1 = Agriculture or Forestry 2 = Biological Sciences 3 = Business 4 = Education 5 = Engineering 6 = English 7 = Health-related 8 = History or Political Science 9 = Humanities 10 = Fine Arts 11 = Mathematics or Statistics 12 = Physical Sciences 13 = Social Sciences 14 = Other Technical 15 = Other Non-technical

Each of these six personal and professional items described in Tables 3.8 and 3.9 serve as independent variables and are included on the first level of the HLM models that consider individual faculty characteristics.

Independent Variables: Institutional (Level 2)

The second level of the HLM model included institutional characteristics and their influence upon faculty engagement practices and values. Four measures were considered as predictors in this second level of the model and are outlined in Table 3.10.

Table 3.10

Level 2 Independent Institutional Variables: HERI Faculty Survey Items & Response Options

Independent Variable	2013-14 HERI Faculty Survey Item	Response Options
Carnegie Classification	Derived from Carnegie Classification 2010: Basic	1 = Doctoral/Research Universities 2 = Master's College and Universities 3 = Baccalaureate Colleges 4 = Other (theological, other health professions, etc.)
Institutional Control	Institution Control:	1 = Public 2 = Private
Historically Black Colleges and Universities	HBCU Flag:	1 = Not HBCU 2 = Public HBCU 3 = Private HBCU
Institutional Priority: Civic Engagement	HERI Construct	Derived from three Faculty Survey Items

As noted above, the Level 2 variable for Institutional Priority on Civic Engagement is a construct developed by CIRP using Item Response Theory. This construct measures the extent to which faculty believe their institution is committed to facilitating civic engagement among students and faculty. Table 3.11 outlines the items included in this construct.

Table 3.11

Institutional Priority: Civic Engagement - Independent Variable - Construct Items

Independent Variable Category	2013-14 HERI Faculty Survey Item	Response Options
Institutional Priority	Indicate how important you believe each priority listed below is at your college or university: Facilitate student involvement in community service.	1 = Low Priority 2 = Medium Priority 3 = High Priority 4 = Highest Priority
Institutional Priority	Indicate how important you believe each priority listed below is at your college or university: Provide resources for faculty to engage in community-based teaching or research.	1 = Low Priority 2 = Medium Priority 3 = High Priority 4 = Highest Priority
Institutional Priority	Indicate how important you believe each priority listed below is at your college or university: Create and sustain partnerships with surrounding communities.	1 = Low Priority 2 = Medium Priority 3 = High Priority 4 = Highest Priority

The descriptive properties of the Institutional Priority: Civic Engagement variable as constructed by HERI are outlined in Table 3.12 and the IRT parameters are reported in Table 3.13.

Table 3.12

Institutional Priority: Civic Engagement - Construct Properties

Descriptive Statistic	Value
N	14,510
Mean	49.52
Median	48.44
Standard deviation	8.570
Minimum	31.17
Maximum	70.24

Table 3.13

IRT parameters for Institutional Priority: Civic Engagement

Faculty Survey Item	α	β_1	β_2	β_3
Institutional Priority: Facilitate student involvement in community service.	1.29	-2.09	-0.15	1.77
Institutional Priority: Provide resources for faculty to engage in community-based teaching or research.	4.27	-0.77	0.41	1.61
Institutional Priority: Create and sustain partnerships with surrounding communities.	2.50	-1.21	0.13	1.51

As can be seen regarding the survey items used in the construct Institutional Priority on Civic Engagement, two items are considered very high and one falls in the top end of the moderate range of values as evaluated by the interpretation of values for parameters in Table 3.7.

Analytical Methods

This section outlines the analytical tools and methods used in the HLM process. Information about the analysis software and procedures are described. Additional detail is given about HLM procedures and the formal model building process.

Software

The software used to analyze the data in this study is Stata 14.2, developed by StataCorp for statistics and data analysis. As discussed earlier, HLM is a method of multilevel modeling that accounts for hierarchical, or nested, levels of data. The nested component means, “Smaller levels of analysis are contained within larger grouper units” (Robson & Pevalin, 2016, p. 2). Statistically, this means HLM allows the dependent measure of interest to vary between the units of analysis, which, in this case, includes the many colleges and universities. Robson and Pevalin (2016) described this as the interaction of the micro and the macro: “Micro-level effects vary significantly across larger units at the meso and macro” (p. 6). The Stata command MIXED was developed for multilevel model analysis and is used in this analysis. While producing the model, it accounts for the lack of independence within the colleges and universities and estimate variances of the random intercepts. In addition, the Stata command XTMRHO provides the intraclass correlation coefficient (ICC), a key value that tells how much of the variation in the dependent variable can be attributed to differences between your level two variable (college or university). If the ICC is zero or close to zero, it indicates there is no evidence of nesting effects in the data.

Descriptive and Diagnostic Analysis

Before building the two models for Civic Minded Practice and Civic Minded Values, I conducted robust descriptive and diagnostic analyses of the predictor variables. This

analysis helped discern the distributions of each of these variables and provided summary statistics on each variable's mean, standard deviation, skew, and kurtosis. In addition, I examined the possible relationships between independent variables, with the goal of avoiding multicollinearity between variables that can impact the coefficients of these variables and their standard errors.

Model Building

Null model. The first step in creating a hierarchical linear model is to run a null or empty model. This model does not include any independent variables and allows us to check how much variance in the dependent variable is explained by differences in the Level 2 groups—in this case, the various colleges and universities. The null indicates whether there is any evidence of random intercepts for the level two groups and whether multilevel modeling should be pursued (Robson & Pevalin, 2016). In essence, the null model tells if there are group effects in the data. This step allowed me to calculate the intraclass correlation coefficient (ICC) described earlier and provide a baseline for assessing and comparing the explanatory power of other models that do include the independent variables.

Equation 1 represents the null model. The Y_{ij} term represents the dependent variable, either Civic Minded Practices (CMP) or Civic Minded Values (CMV). The subscript i represents an individual faculty member at institution j . β_0 is the overall mean of the dependent variable across all groups. The term μ_j is the random intercept term for each group, or institution. The term e_{ij} is the residual, or the difference between the i th faculty member's standardized score and the group mean.

$$Y_{ij} = \beta_0 + \mu_j + e_{ij} \quad (1)$$

Level 1 model. The next step of the model building process involved adding the Level 1 independent variables to the model. These predictors included the personal and professional factors described earlier, all operating at the individual faculty level. Equation 2 represents the model with the personal and professional variables added to the equation.

$$\begin{aligned}
 Y_{ij} = & \beta_0 + \beta_1 X_{1ij}(\text{female}) + \beta_2 X_{1ij}(\text{age}) + \beta_3 X_{1ij}(\text{age squared}) + \beta_4 X_{1ij}(\text{Black}) \\
 & + \beta_5 X_{1ij}(\text{Native American or Alaskan}) + \beta_6 X_{1ij}(\text{Asian or Pacific Islander}) + \\
 & \beta_7 X_{1ij}(\text{Latino}) + \beta_8 X_{1ij}(\text{Multiracial}) + \beta_9 X_{1ij}(\text{Other}) + \beta_{10} X_{1ij}(\text{academic rank}) \\
 & + \beta_{11} X_{1ij}(\text{tenure status}) + \beta_{12} X_{1ij}(\text{Biglan classification}) + \mu_j + e_{ij}
 \end{aligned} \quad (2)$$

The race/ethnicity variables are derived from the HERI data based on a series of survey items that asked faculty members to select all the races/ethnicities with which they identify. Small response rates as well as ease of interpretation resulted in combining the original Asian American/Asian variable with the Native Hawaiian/Pacific Islander variable. In addition, Mexican American/Chicano, Puerto Rican, and Other Latino variables were combined into one Latino variable. A Multiracial variable was developed based on participants who chose more than one race option. The Biglan classification variable was derived from the faculty member's inclusion in one of the 15 aggregated departments described earlier using the Biglan classification schemes of hard-pure, soft-pure, hard-applied, and soft-applied.

Level 2 model. The final step of the model building process involved adding the Level 2 independent variables to the model. These are the predictors that operate on the institutional level. Equation 3 represents the full model with the personal, professional, and institutional variables added to the equation.

$$\begin{aligned}
 Y_{ij} = & \beta_0 + \beta_1 X_{1ij}(\text{female}) + \beta_2 X_{1ij}(\text{age}) + \beta_3 X_{1ij}(\text{age squared}) + \beta_4 X_{1ij}(\text{Black}) \quad (3) \\
 & + \beta_5 X_{1ij}(\text{Native American or Alaskan}) + \beta_6 X_{1ij}(\text{Asian or Pacific Islander}) + \\
 & \beta_7 X_{1ij}(\text{Latino}) + \beta_8 X_{1ij}(\text{Multiracial}) + \beta_9 X_{1ij}(\text{Other}) + \beta_{10} X_{1ij}(\text{academic rank}) \\
 & + \beta_{11} X_{1ij}(\text{tenure status}) + \beta_{12} X_{1ij}(\text{Biglan classification}) + \beta_{13} X_{1ij}(\text{Carnegie}) \\
 & \text{classification}) + \beta_{14} X_{1ij}(\text{public or private}) + \beta_{15} X_{1ij}(\text{HBCU}) + \\
 & \beta_{16} X_{1ij}(\text{Institutional Priority: Civic Engagement}) + \mu_j + e_{ij}
 \end{aligned}$$

The Carnegie classification variable was derived from the HERI provided variable of Basic 2010 categories. In order to aid in the ease of interpretation, the 11 Carnegie response choices were collapsed into four categories representing Doctoral/Research Universities, Master's Colleges and Universities, Baccalaureate Colleges, and Other institutions. The Institutional Priority on Civic Engagement variable was derived from averaging the score from each participating faculty member at a particular institution.

Limitations

There are a few key limitations regarding this study. One of the first is this study relied on secondary data; therefore, the variables used in this study and models are limited to those available from the 2013-14 HERI Faculty Survey. The Faculty Survey provided a large collection of responses from faculty members and institutions across the country, and the large sample is a strength of the analysis. In regard to faculty issues related to engagement, however, the types of variables are limited. For example, as discussed in the literature review, land-grant institutions and the land-grant movement in general has a noticeable impact on the issues surrounding the scholarship of engagement; however, the HERI survey did not provide the necessary data to distinguish which participants were from land-grant institutions. In addition, it would be valuable to know if any of the participating institutions

had achieved the Carnegie Foundation's Community Engagement Elective Classification and whether that level two group distinction impacted the results; however, that information was not known.

Another key limitation noted earlier is the self-selection bias that operates on a couple of levels. Survey data was only collected from institutions that chose to utilize HERI's research services; thus, the analysis does not allow for randomization and restricts inference and generalizability to the faculty members of these institutions. In addition, while HERI encourages participating institutions to collect survey data from all faculty members, the data provided for this study does not provide any information on the response rates at each institution. Self-selection bias operates on the individual level as well.

Finally, the hierarchical linear modeling techniques used in this particular analysis limit the group effects to Level 2, which is defined as the college or university. The depth of the group effects may, however, extend even further. Faculty are nested within departments, and the heterogeneity and culture within departments may influence values and practices and differentiate individual departments from the larger college or university. The impact of departmental influences is examined somewhat in the tested models by the inclusion of the Biglan classification variable that looks at the influence of discipline on the individual level, or Level 1 of the model. It is possible that departmental influence may operate on a third level; however, that adds a level of complexity and modeling that is not covered in this study.

Summary

In summary, this quantitative study addressed the research questions inspired by Wade and Demb's (2009) Faculty Engagement Model. As such, a large, cross-sectional, multi-institutional data set from the 2013-14 HERI Faculty Survey was utilized to examine

the personal, professional, and institutional factors that influence faculty members' engagement practices and values. While some research is known about each of these areas, it is limited. This study contributed to the literature through a multi-institutional analysis consisting of a diverse sample of four-year colleges and universities. In addition, the interactions of each of these sets of factors is not fully understood, though this research contributed to the understanding of some interactions, particularly in regard to departmental and institutional influences.

The variables and constructs described include influences at two levels: the individual faculty member and the institution. As such, a multilevel or hierarchical analysis is used to answer the final research question, which combined the three dimensions into one comprehensive model. This method allowed for an understanding of faculty values and practices nested within the institutions and the influences at both the individual and group levels. In conclusion, this research provides higher education institutions a deeper understanding of faculty engagement values and practices and better informs higher institutions how to support the scholarship of engagement.

CHAPTER FOUR: RESULTS

Introduction

The purpose of this study was to examine the relationships between higher education faculty members' personal characteristics, professional characteristics, and institutional factors, in relation to the faculty members' values and practices regarding faculty engagement. Faculty members are the critical link and the initiator of engagement between the university and the community. It is important to better understand this area of faculty work to assist engaged faculty and provide institutional support.

As discussed earlier, while some factors and predictors of faculty engagement have been studied, limited research exists that examines the key engagement characteristics and factors with a multifaceted model that incorporates data from a multitude of diverse institutions. Wade and Demb's (2009) Faculty Engagement Model proposes that the factors are integrated into a model that examines personal, professional, and institutional influences of engagement. As such this study examined these issues in an integrated multilevel model that addressed the following research questions:

1. What is the relationship between the personal faculty characteristics of gender, race, and age on the engagement values and practices of faculty members?
2. What is the relationship of the professional faculty characteristics of rank, tenure status, and departmental field on the engagement values and practices of faculty members?
3. What is the relationship of the institutional characteristics of institutional type and perceived institutional support of engagement on the engagement values and practices of faculty members?

4. What is the relationship of a faculty engagement model that includes personal, professional, and institutional factors on the engagement values and practices of faculty members?

The following chapter details the data analysis process and results of this study. The process is guided by the use of hierarchical linear modeling (HLM) using data from the 2013-14 Higher Education Research Institute (HERI) Faculty Survey. These results examine the preliminary analyses of the outcome variables, the individual level predictors, and the institutional level predictors. This analysis includes a review of the descriptive statistics for each variable. The chapter concludes with a detailed presentation of my HLM results and a discussion guided by the framework of the Faculty Engagement Model and the study's research questions.

Examination of the Dependent Variables

Multilevel models were run on two dependent variables of interest: Civic Minded Practice and Civic Minded Values. Both of these variables are existing constructs created by HERI which provide insight into the engagement practices and values of faculty members in higher education. Civic Minded Practice is a unified measure of the faculty involvement in civic activities. Civic Minded Values is a unified measure of the extent to which faculty believe civic engagement is a central part of the college mission. As described in Chapter Three of this study, both constructs were validated by HERI and the Cooperative Institutional Research Program (CIRP) at the University of California at Los Angeles using Item Response Theory (IRT). The IRT parameters for both constructs can be found in Table 3.5 and Table 3.6 and supported that the survey items included in these constructs tap into the items of interest with high degrees of validity.

Descriptive Statistics of Dependent Variables

Table 4.1 presents the descriptive statistics of the two dependent variables: Civic Minded Practice (CMP) and Civic Minded Values (CMV). The skewness and kurtosis in both variables indicate they both demonstrate robust normality. It is also noted here that during the analysis, the scores for CMP and CMV were standardized to a mean of 0 and a standard deviation of 1 in order to aid in interpretation of model results.

Table 4.1
Descriptive Statistics: Dependent Variables

Variable	N	Mean	SD	Min	Max	Skewness	Kurtosis
Civic Minded Practice	16,868	50.017	8.354	36.97	73.98	0.127	2.132
Civic Minded Values	15,097	49.503	8.715	28.10	64.87	-0.078	2.576

Examination of Independent Variables

The following section presents the descriptive statistics of the independent variables prior to running the HLM analysis. The means, standard deviations, and minimum and maximum values are presented for predictors on both the individual level (or Level 1 of the model) and the institutional level (or Level 2 of the model).

Faculty-level Descriptive Statistics

Table 4.2 provides the descriptive statistics for the independent variables included in the HLM analysis on the individual, or faculty level.

Table 4.2
Descriptive Statistics: Faculty-level Independent Variables

Variable Name	Mean	SD	Min	Max
Female	0.468	0.499	0	1
Age	50.837	11.107	23	94
Age-Squared	2707.712	1142.238	529	836
Black	0.022	0.148	0	1
American Indian or Alaska Native	0.002	0.045	0	1
Asian (Asian American, Asian, Native Hawaiian, or Pacific Islander)	0.052	0.222	0	1
Latino (Mexican American/Chicano, Puerto Rican, or Other Latino)	0.032	0.175	0	1
Multiracial	0.033	0.180	0	1
Other Race	0.020	0.141	0	1
Academic Rank	2.157	1.001	1	5
Tenure Status	1.694	0.907	1	4
Biglan Classification	2.996	1.285	1	5

Of note regarding these faculty independent variables, female respondents represented 46.8% of the analytic sample while male respondents represented 53.2%. Faculty identifying as White/Caucasian constituted the largest majority of respondents with 85% of the sample. The next largest ethnic group was those who identified as Asian with 5.2% of the respondents. The Asian group included those who identified as Native Hawaiian or Pacific Islander due to the low response rate of those subgroups. Those who chose more than one race group were classified as Multiracial and comprised 3.3% of the sample. Those who identified as Mexican American/Chicano, Puerto Rican, or Other Latino were collapsed into one comprehensive Latino group that included 3.2% of the sample. Those who marked African American/Black included 2.2% of the respondents; and lastly, those who marked Other comprised 2.0% of the final sample.

Regarding the individual independent variables operating on the professional level of characteristics, full professors represented 32.5% of the sample, associate professors 30.2%, and assistant professors 26.3%. Lecturers and instructors were collapsed into the final category and represented the other 11% of the sample. Tenured faculty comprised the majority of the analytic sample at 57.2%, followed by 20.1% of respondents who were on the tenure track but not yet tenured. Those not on a tenure track but whose institution has a tenure system included 18.8% of the respondents.

The last independent variable operating in the professional realm was the department or disciplinary level. To aid in analysis of departmental or disciplinary influence on engagement practices and values, the Biglan Classification of Academic Disciplines (Biglan, 1973) was used as a framework. HERI provided aggregated department data with respondents classified into one of 15 departments. In this analysis, faculty members were assigned to one of the four primary Biglan categories or to an Other category if they did not fit in any of the primary Biglan groups. Hard-pure disciplines included Biological Sciences, Mathematics or Statistics, and Physical Sciences faculty, comprising 20.0% of the sample. Hard-applied disciplines included Agriculture or Forestry, Engineering, and Health-related faculty, comprising 10.3% of the sample. The majority of the faculty at 32.3% are part of the Soft-pure disciplines, which included English, History or Political Science, Humanities, and Fine Arts. The Soft-applied disciplines, which included Business, Education, and Social Sciences, comprised 24.9% of the sample. Finally, those whose departmental classification was “Other Technical” or “Other Non-technical” were grouped into an Other category making up 12.5% of the respondents.

Institutional-level Descriptive Statistics

There are four variables that operate on Level 2, or the institutional level of the model. These independent variables included the basic Carnegie Classification of the institution; the Institutional Control, reflecting whether it is privately or publicly controlled; whether the institution is a Historically Black College or University (HBCU); and a variable representing the institution's mean average score on priority on engagement. Table 4.3 provides the descriptive statistics for the independent variables that are included in the HLM analysis on the institutional level.

Table 4.3
Descriptive Statistics: Institutional-level Independent Variables

Variable Name	Mean	SD	Min	Max
Carnegie Classification	2.024	0.813	1	4
Institutional Control (public or private)	0.374	0.484	0	1
HBCU Status	0.006	0.075	0	1
Institutional Priority on Engagement	49.524	3.218	35.23	70.24

HERI-provided Carnegie data described as the Basic Classification 2010, a description that assigned each institution into one of 12 classification levels. In order to aid in analysis, these categories were collapsed into the following four categories: Doctoral/Research institutions, Master's degree granting institutions, Baccalaureate degree granting institutions, and Other institutions which primarily included those classified as theological, other health professionals, or associate's degree institutions. Faculty from Master's degree institutions comprised the majority of the analytic sample at 37.7%,

followed by Doctoral/Research faculty members at 30.6%, and Baccalaureate faculty at 30.4%. Faculty from Other institutions included only 1.3% of the respondents. Faculty from privately-controlled institutions represented 62.6% of the analytic sample, while faculty from public institutions comprised the other 37.4%. Only 0.6% of the respondents represented historically black colleges and universities.

As described earlier, Institutional Priority on Civic Engagement is a construct developed by HERI and validated by CIRP also using Item Response Theory. This construct measures the extent to which faculty believe their institution is committed to facilitating civic engagement among students and faculty. The IRT parameters for this construct can be found in Table 3.13 and indicate that the survey items included in the construct tap into the item of interest with a high degree of validity. Each individual faculty member had an individual score for this construct. In order to convert this item into a Level 2 institutional variable, a mean value of Institutional Priority on Civic Engagement was calculated for each of the 293 institutions in the sample using the individual scores of faculty members at each institution. For analysis purposes, this final institutional variable was centered. Centering variables is a common practice in multilevel models for many predictor variables. Sometimes referred as grand mean centering, it is a process in which a variable is rescaled by creating a new variable by subtracting the mean of the variable from its observed scores (Robson & Pevalin, 2016). A centered variable has a mean of zero, thereby providing an interpretable zero point on the scale. The centered variable retains its original units of measurement.

Hierarchical Linear Modeling Results

This study examined the relationships between higher education faculty members' personal characteristics, professional characteristics, and institutional factors, in relation to

the faculty members' values and practices regarding faculty engagement. The faculty members in the HERI data set are clustered into groups, in this case by their colleges and universities, meaning the assumption of independence between observations is violated. In order to account for this group influence, the best method of analysis is hierarchical linear modeling (HLM), which accounts for the relatedness due to group-level factors.

The following section details the results of running the multilevel models on the 2013-14 HERI Faculty Survey data in order to address the research agenda and assess the impact of the independent variables on faculty members' engagement practices and values. The method produces random intercept models in which the intercept is allowed to vary for each Level 2 group, defined as the faculty member's college or university. The following results include the null or empty model with no independent variables. The null model indicates whether there is any evidence of random intercepts for the Level 2 groups and whether to continue to pursue multilevel modeling. The second model includes all the Level 1 predictors, which are the personal and professional characteristics of the individual faculty members. The final model includes all the Level 1 predictors as well as the Level 2, or institutional variables. This process is repeated for both dependent variables in this study, Civic Minded Practice and Civic Minded Values.

Throughout the model building process, the parameter estimates enable evaluation of each model's predictive ability. This is assessed through the calculation of the intraclass correlation coefficient (ICC), a key value that tells how much of the variation in the dependent variable can be attributed to differences between Level 2 variables (institution). In addition, the likelihood ratio test produces a parameter that helps assess whether to continue pursuing the multilevel model analysis in the early stages. In order to assess model fit, the

process produced parameters for log likelihood (LL), the Akaike information criterion (AIC), and the Bayesian information criterion (BIC). The log likelihood assesses the lack of fit, and a comparison of LL change between models can indicate if the fit is getting better. In addition, decreases in AIC and BIC values suggest the fit is improving between subsequent models.

Null Model Results

The first step was to create a model that included no predictor variables at either the individual or institutional levels. This step is critical in determining if there is non-independence of individual faculty responses due to the group influences of a faculty member's institution. The null model estimates the Level 1 or between-group variance of the Level 2 variable, and it estimates the within-group or between-subject variance at Level 1. Table 4.4 provides the null model results for both Civic Minded Practice and Civic Minded Values.

Table 4.4
Null Model Results for Civic Minded Practice and Civic Minded Values

Dependent Variable	Intercept	Between-group variance (Level 2)	Within-group variance (Level 1)	Likelihood Ratio Test	ICC
Civic Minded Practice	0.037 * (0.018)	0.052 *** (0.003)	0.946 *** (0.052)	613.76 ***	0.052
Civic Minded Values	0.019 (0.020)	0.067 *** (0.004)	0.942 *** (0.005)	552.91 ***	0.067

* p<0.05, ** p<0.01, *** p<0.001, standard errors in parentheses

Interpreting the null model results. The two null models indicate there is evidence that using a random intercepts model helps explain the variance in the faculty scores for Civic Minded Practice (CMP) and Civic Minded Values (CMV). The likelihood ratio test tests the null hypothesis that the variance of the random intercept of the Level 2 grouping

variable is equal to zero. For CMP, the likelihood ratio value of 613.76 and its significance give strong evidence for rejecting the null hypothesis. The same is true for CMV with a likelihood ratio value of 552.91. There is convincing evidence there is significant variation in the intercepts, and the Level 2 groupings (in this case the institutions) impact the scores of both dependent variables.

The null model results provide a within-group variance and a between-group variance. The within-group variance is estimated at Level 1 and approximates the variance in the dependent variable that was accounted for by individual faculty respondents without regard to institutional affiliation. The between-group variance at Level 2 estimates the variance that was attributable to institutional affiliation. For Civic Minded Practice, the null model's Level 1 variance was estimated at $\sigma^2 = 0.946$, and the Level 2 variance was estimated at $\tau^2 = 0.052$. Based on these values, the ICC indicated that 5.2% of the variability in Civic Minded Practice scores can be attributed to differences between institutions. For Civic Minded Values, the null model's Level 1 variance was estimated at $\sigma^2 = 0.942$, and the Level 2 variance was estimated at $\tau^2 = 0.067$. Based on these values, the ICC indicated that 6.6% of the variability in Civic Minded Value scores can be attributed to differences between institutions.

Within and Full Model Results for Civic Minded Practice

The second step of the modeling procedure is the creation of the Level 1 or within-institution model. This included adding the individual (or faculty-level) independent variables described earlier in Table 4.2. The final or full model, also known as the between-institution or Level 2 model, includes the institutional-level independent variables described

in Table 4.3. The results of the model building process for Civic Minded Practice are displayed in Table 4.5.

Table 4.5
Two Level Model Predicting Civic Minded Practice

	Null Model	Level 1 Model	Level 2 Model	
Intercept	0.037 (0.018)	-2.216 (0.188)	-2.334 (0.193)	***
Female		0.116 (0.019)	0.114 (0.019)	***
Age		0.069 (0.072)	0.070 (0.007)	***
Age-Squared		-0.001 (0.000)	-0.001 (0.000)	***
White/Caucasian (reference group)		-	-	
Black		0.324 (0.060)	0.309 (0.060)	***
American Indian or Alaskan Native		0.788 (0.214)	0.808 (0.214)	***
Asian or Pacific Islander		-0.012 (0.042)	-0.017 (0.042)	
Latino		0.187 (0.056)	0.189 (0.056)	***
Multiracial		-0.140 (0.106)	-0.128 (0.106)	
Other Race		0.222 (0.066)	0.226 (0.071)	**

Table 4.5 (continued)

Full Professor (reference group)	-	-	-
Associate Professor	0.038 (0.024)	0.036 (0.024)	
Assistant Professor	-0.040 (0.043)	-0.026 (0.044)	
Lecturer/Instructor	-0.850 (0.051)	-0.086 (0.053)	
Tenured (reference group)	-	-	-
On Tenure Track	0.123 (0.042)	**	0.104 (0.043) *
Not on Tenure Track	0.104 (0.042)	*	0.092 (0.043) *
No Tenure System	0.085 (0.070)		0.097 (0.072)
Biglan: Hard-pure (reference group)	-	-	-
Biglan: Hard-applied	0.556 (0.035)	***	0.561 (0.036) ***
Biglan: Soft-pure	0.132 (0.026)	***	0.135 (0.026) ***
Biglan: Soft-applied	0.477 (0.027)	***	0.473 (0.028) ***
Biglan: Other	0.396 (0.033)	***	0.394 (0.033) ***
Carnegie – Doctoral/Research (reference group)	-	-	-
Carnegie – Master's		0.165 (0.046)	***
Carnegie – Baccalaureate		0.047 (0.049)	
Carnegie – Other		0.088 (0.144)	
Institutional Control (Public)		0.081 (0.040)	*

Table 4.5 (continued)

HBCU				0.193 (0.148)	
Institutional Priority on Engagement				0.019 (0.005)	***
Level 2 (between-group variance)	0.052 (0.003)	***	0.043 (0.003)	***	0.031 (0.003)
Level 1 (within-group variance)	0.946 (0.005)	***	0.895 (0.006)	***	0.893 (0.006)
ICC	0.052		0.046		0.033
N	16863		11377		11206

* p<0.05, ** p<0.01, *** p<0.001, standard errors in parentheses

Interpreting the within-model results for Civic Minded Practice. The within-model results for Civic Minded Practice (CMP) include all the Level 1 predictors. The predictors of female gender and age revealed significant positive mean differences in faculty scores of CMP. The ethnic groups of Black, Native American or Alaskan Native, Latino, and Other ethnicities had significant positive mean differences in CMP scores compared to scores of White/Caucasian faculty. Asian and Multiracial ethnicities displayed negative mean differences in scores in comparison to Caucasians, but neither was significant. Academic rank was not a significant factor for any of the subgroups when compared to full professors. Faculty on a tenure track, as well as those not on a tenure track but whose institution does have tenure, both revealed positive and significant differences in mean CMP scores when compared to tenured faculty. Faculty members in the Biglan classifications of Hard-applied, Soft-pure, Soft-applied, and Other all scored significantly higher compared to faculty in the Hard-pure classification. For Civic Minded Practice, the within-model's Level 1 variance was estimated at $\sigma^2 = 0.895$, and the Level 2 variance was estimated at $\tau^2 = 0.043$. Based on

these values, the ICC for the Level 1 model indicated that 4.6% of the variability in CMP scores can be attributed to differences between institutions.

Interpreting the full model results for Civic Minded Practice. The full model results for Civic Minded Practice include all the Level 1 predictors as well as the Level 2 (or institutional) predictors. In regard to the Level 1 (or individual-level) predictors, the full model results are largely the same in terms of direction, significance, and value. The predictors of female gender and age again revealed significant positive differences in faculty standardized scores of CMP. The ethnic groups of Black, Native American or Alaskan Native, Latino, and Other ethnicities also displayed significant positive mean differences in standardized scores as compared to White/Caucasian faculty. Academic rank was not a significant factor for any of the subgroups in the full model. As with the Level 1 model, faculty on a tenure track as well as those not on a tenure track but whose institution does have tenure both revealed significant and positive mean differences in CMP results when compared to tenured faculty. One difference between the full CMP model and the within-group model was that the significance level of faculty on the tenure track but not yet tenured was less than the significance level of the same variable on the within-group model. As before, faculty members in the Biglan classifications of Hard-applied, Soft-pure, Soft-applied, and Other all revealed significant and positive mean differences in CMP scores compared to faculty in the Hard-pure classification, with very similar values as the within-group model.

The full model included the Level 2 or institutional predictors. Faculty from institutions classified as Carnegie Master's institutions revealed significant positive mean differences in Civic Minded Practice scores compared to faculty from Doctoral/Research

institutions. None of the other Carnegie classifications showed significant differences. The variable of Institutional Control indicated whether a university was public. Faculty from publicly-controlled institutions scored significantly higher on standardized scores for CMP compared to private faculty. Being from a Historically Black College and University exhibited higher mean differences in CMP scores; however, the value was not significant. Finally, the variable that measured the institutional priority on civic engagement revealed a significant positive association on faculty members' standardized scores on CMP. For Civic Minded Practice, the full model's Level 1 variance was estimated at $\sigma^2 = 0.893$, and the Level 2 variance was estimated at $\tau^2 = 0.031$. Based on these values, the ICC for the Level 2 model indicated that 3.3% of the variability in Civic Minded Practice scores can be attributed to differences between institutions.

Within and Full Model Results for Civic Minded Values

The same model building procedures for the second dependent variable of Civic Minded Values were followed. This process included the creation of the Level 1 (or within-institution) model incorporating the individual (or faculty-level) independent variables described earlier in Table 4.2. The final or full model, also known as the between-institution or Level 2 model, included the institutional level independent variables described in Table 4.3. The results of the model building process for Civic Minded Values are displayed in Table 4.6.

Table 4.6
Two Level Model Predicting Civic Minded Values

	Null Model	Level 1 Model	Level 2 Model	
Intercept	0.019 (0.020)	-0.964 (0.181)	***	-1.001 (0.186) ***
Female		0.329 (0.018)	***	0.326 (0.018) ***
Age		0.005 (0.007)		0.004 (0.007)
Age-Squared		0.000 (0.000)		0.000 (0.000)
White/Caucasian (reference group)			-	-
Black		0.515 (0.057)	***	0.505 (0.058) ***
American Indian or Alaskan Native		0.646 (0.206)	**	0.671 (0.206) **
Asian or Pacific Islander		0.280 (0.040)	***	0.278 (0.040) ***
Latino		0.513 (0.054)	***	0.518 (0.054) ***
Multiracial		-0.319 (0.102)	**	-0.300 (0.103) **
Other Race		0.210 (0.064)	**	0.191 (0.069) **
Full Professor (reference group)			-	-
Associate Professor		0.090 (0.023)	***	0.089 (0.023) ***
Assistant Professor		0.129 (0.041)	**	0.129 (0.042) **
Lecturer/Instructor		0.090 (0.049)		0.092 (0.051)
Tenured (reference group)			-	-
On Tenure Track		0.098 (0.040)	*	0.087 (0.041) *

Table 4.6 (continued)

Not on Tenure Track	0.160 (0.040)	***	0.151 (0.041)	***
No Tenure System	0.241 (0.069)	***	0.192 (0.068)	**
Biglan: Hard-pure (reference group)	-	-	-	-
Biglan: Hard-applied	0.553 (0.034)	***	0.556 (0.035)	***
Biglan: Soft-pure	0.321 (0.025)	***	0.322 (0.025)	***
Biglan: Soft-applied	0.446 (0.026)	***	0.450 (0.027)	***
Biglan: Other	0.438 (0.032)	***	0.442 (0.032)	***
Carnegie – Doctoral/Research (reference group)	-	-	-	-
Carnegie – Master's		0.169 (0.043)		***
Carnegie – Baccalaureate		0.084 (0.046)		
Carnegie – Other		0.096 (0.135)		
Institutional Control (Public)		-0.125 (0.038)		***
HBCU Status		0.229 (0.142)		
Institutional Priority on Engagement		0.026 (0.005)		***
Level-Two (between group variance)	0.067 (0.004)	***	0.047 (0.004)	***
Level-One (within group variance)	0.942 (0.005)	***	0.829 (0.006)	***
ICC	0.066		0.054	
N	15094		11355	
	11184			

* p<0.05, ** p<0.01, *** p<0.001, standard errors in parentheses

Interpreting the within model results for Civic Minded Values. The within-model results for Civic Minded Values (CMV) included the same Level 1 predictors used in the Civic Mined Practice (CMP) models. The predictor of female gender revealed significant positive mean differences in scores compared to male faculty. The mean differences were also larger than the impact gender had on CMP standardized scores. Unlike the impact on CMP scores, the variable for Age did not have a significant impact on CMV scores. The ethnic groups of Black, Native American or Alaskan, Asian or Pacific Islander, Latino, and Other ethnicities had significant positive mean differences on CMV scores as compared to White/Caucasian faculty. Those who were Multiracial revealed significant negative mean differences compared to scores for White/Caucasians. While Academic Rank was not a significant factor impacting CMP scores, it had a positive influence on CMV standardized scores for the subgroups of associate professor, assistant professor, and lecturer/instructor when compared to full professors; however, the impact of Academic Rank on the lecturer/instructor group was not significant. Tenure status revealed significant and positive mean differences in CMV scores for every subgroup compared to tenured faculty. Similar to the models for CMP scores, faculty members in the Biglan classifications of Hard-applied, Soft-pure, Soft-applied, and Other all revealed significant positive mean differences in CMV standardized scores compared to faculty in the Hard-Pure classification. For Civic Minded Values, the within-model's Level 1 variance was estimated at $\sigma^2 = 0.829$, and the Level 2 variance was estimated at $\tau^2 = 0.047$. Based on these values, the ICC for the Level 1 model indicated that 5.4% of the variability in Civic Minded Values scores can be attributed to differences between institutions.

Interpreting the full model results for Civic Minded Values. The full model results for Civic Minded Values include all the Level 1 predictors as well as the Level 2 (or institutional) predictors. The full model results for the individual-level predictors are largely the same in terms of significance, direction, and value. Female gender was again a significant positive predictor of CMV scores compared to scores of male faculty. Age, however, did not reveal a significant mean difference between the scores. As before, the ethnic groups of Black, Native American or Alaskan, Asian or Pacific Islander, Latino, and Other ethnicities were revealed to have significant positive mean differences in CMV scores compared to White/Caucasian faculty, and, once again, those who were Multiracial had a significant negative difference compared to White/Caucasians. Academic Rank was a positive and significant predictive factor for the subgroups of associate professor and assistant professor when compared to full professors. When compared to tenured faculty, tenure status indicated significant positive mean differences in CMV scores for faculty on a tenure track, those not on a tenure track but whose institution does have tenure, and those whose institution does not have a tenure system. As with the Level 1 model for CMV scores, the full model revealed faculty members in the Biglan classifications of Hard-applied, Soft-pure, Soft-applied, and Other all scored significantly higher on Civic Minded Values compared to faculty in the Hard-Pure classification.

The full model for Civic Minded Values included the same Level 2 institutional predictors used in the models for Civic Minded Practice. As with the previous model, faculty from those institutions classified as Carnegie Master's institutions showed significant positive mean differences in CMV standardized scores compared to faculty from Doctoral/Research institutions. None of the other Carnegie classifications revealed a

significant difference in CMV scores. Faculty member from publicly-controlled universities exhibited a significant negative mean difference in scores for CMV compared to faculty from privately controlled institutions. The direction of this variable's impact contrasted what was seen in the full model for Civic Minded Practice. As with the CMP model, faculty from Historically Black Colleges and Universities exhibited a positive mean difference in CMV scores; however, once again, the value was not significant. Finally, scores that measured the institutional priority on civic engagement also revealed a significant positive relationship in faculty members' scores on CMV. For Civic Minded Values, the full model's Level 1 variance was estimated at $\sigma^2 = 0.831$, and the Level 2 variance was estimated at $\tau^2 = 0.026$. Based on these values, the ICC for the Level 1 model indicated that 3.1% of the variability in Civic Minded Value scores can be attributed to differences between institutions.

Assessing the Model Fit

There are a handful of statistics that allow the models to be assessed in terms of fit. As noted by Robson and Pevalin (2016), "The model fit statistics are generally measuring whether the 'lack of fit' of a model is improving" (p. 58). The most common statistics used to assess fit in multilevel modeling are the log likelihood (LL), the Akaike information criterion (AIC), and the Bayesian information criterion (BIC). The log likelihood is a statistic produced in the multilevel modeling process that represents the sum of the squared residuals (or errors). Used alone, the LL statistic is not very helpful, however, since the sum of the errors is expected to decrease if the model fit is improving; nevertheless, the LL can be used as an index to compare models. The AIC and the BIC can also be used as indicators of fit. In describing their use, it is noted, "These fit statistics impose a penalty on having too many parameters (i.e. variables) in the model. . . . AIC and BIC scores are lower for better fitting

models” (p. 58). Table 4.7 summarizes the fit statistics for the Civic Minded Practice models, and Table 4.8 summarizes the same statistics for the Civic Minded Values models.

Table 4.7
Fit Statistics for Civic Minded Practice Models

Fit Statistic	Null	Model 1	Model 2
LL	-23621	-15626	-15362
AIC	47248	31296	30780
BIC	47271	31457	30985

Table 4.8
Fit Statistics for Civic Minded Values Models

Fit Statistic	Null	Model 1	Model 2
LL	-21140	-15174	-14922
AIC	42287	30393	29900
BIC	42310	30555	30105

The fit statistics for both sets of models indicate the values for log likelihood (LL), the Akaike information criterion (AIC), and the Bayesian information criterion (BIC) decrease in each successive model. This suggests the fit is improving in each model.

Integrating Model Results & Research Questions

This study’s research questions are based upon the guiding theory of Wade and Demb’s (2009) Faculty Engagement Model. These questions and the hierarchical linear modeling analysis provide a framework for summarizing the results. Each research question is presented below with a summative response based on the HLM results.

1. *What is the relationship between the personal faculty characteristics of gender, race, and age on the engagement values and practices of faculty members?*

The first research question focused on some of the factors in the personal dimension of the Faculty Engagement Model. In this study, the variables gender, race, and age were examined. The impact of these variables on standardized Civic Minded Values scores is examined first. Female gender was found to have a significant positive impact in the full model, increasing scores by 0.326 standard deviations (SD) compared to male faculty. The strength of this positive difference was not greatly impacted by the inclusion of institutional variables, as the increase was 0.329 SD for the Level 1 model. Compared to White/Caucasian faculty, faculty who identified as Black, Native American or Alaskan Native, Asian or Pacific Islander, Latino, and Other races were all found to have a significant positive mean difference in CMV scores. Similar to findings about the impact of gender, the strength of these values was not very different than those in the Level 1 model. Those faculty who identified as Multiracial was the only group that had a significant negative impact on CMV scores compared to White/Caucasians. Age was not found to be a significant factor in the full model nor the Level 1 model.

Similar results from these variables were seen in the models for Civic Minded Practice. Female gender again had a significant positive difference in CMP standardized scores when compared to male faculty; however, the amount of this difference was smaller than CMV scores, increasing the scores by 0.114 SD. In comparison to White/Caucasian faculty, faculty who identified as Black, Native American or Alaskan Native, Latino, and Other races were all found to have a significant positive mean difference in CMV scores. In contrast to CMV scores, being in a group that identified as Asian or Pacific Islander had a negative impact on CMP scores; however, this relationship was not significant. The impact of ethnicity on CMP scores did not differ significantly in comparing the full or within

models. In contrast to CMV, age did have a significant effect on CMP standardized scores in the positive direction, increasing the mean score 0.07 SD for each one-year increase in age.

2. What is the relationship of the professional faculty characteristics of rank, tenure status, and departmental field on the engagement values and practices of faculty members?

The second research question focused on factors in the professional dimension of the Faculty Engagement Model. In this study, the variables of academic rank, tenure status, and departmental field were more closely examined. The impact of these variables on standardized Civic Minded Values scores are discussed before discussing Civic Minded Practice. The faculty rank of Associate Professor or Assistant Professor had a significant positive impact on standardized CMV scores compared to scores for Full Professors. Being a Lecturer/Instructor did not have a significant impact on these scores. The strength of the mean differences did not differ much between the Level 1 and full models. Regarding tenure status, faculty who were on a tenure track but not yet tenured, those who were not on a tenure track though the institution had a tenure system, and those from an institution without a tenure system, all scored significantly higher on CMV scores than fully tenured faculty. To simplify analysis, departmental fields were collapsed into categories defined by Biglan's classification scheme (Biglan, 1973). In comparison to faculty who were part of the hard-pure disciplines, faculty in hard-applied, soft-pure, soft-applied, and a fifth other category all scored significantly higher on standardized CMV scores. Once again, the strength of this relationship was not greatly impacted from the Level 1 model to the full model. The smallest of these impacts on standardized scores was 0.322 SD for faculty in soft-pure disciplines to as high as 0.556 SD for the hard- applied disciplines.

Regarding Civic Minded Practices scores, faculty rank did not have a significant impact on mean differences in scores when comparing any of the subgroups to Full Professors, unlike the differences seen in CMV scores. Faculty who were on a tenure track, as well as those not on a tenure track but whose institution had a tenure system, both scored higher on CMP scores than fully tenured faculty. Being from an institution with no tenure system did not significantly impact CMP scores, unlike the positive significant difference seen with CMV scores. The impact from departmental field was similar to the results seen in CMV scores. In comparison to faculty who were part of the hard-pure disciplines, faculty in hard-applied, soft-pure, soft-applied, and a fifth other category all scored significantly higher on standardized CMP scores. Once again, the strength of this relationship was not greatly impacted from the Level 1 model to the full model. The smallest of these impacts on scores was 0.135 SD for faculty in soft-pure disciplines to as high as 0.561 SD for the hard-applied disciplines.

3. What is the relationship of the institutional characteristics of institutional type and perceived institutional support of engagement on the engagement values and practices of faculty members?

The third dimension of the Faculty Engagement Model focused on the institutional dimension. This study focused on the institutional variables of Carnegie classification, whether the institution was public or private, the HBCU status of the institution, and the institutional mean score on civic engagement as a priority. In examining the models for Civic Minded Values, faculty from Master's institutions scored significantly higher on CMV scores compared to faculty from Doctoral/Research institutions. None of the other Carnegie subgroups had a significant impact on CMV scores. Regarding institutional control, faculty

from public universities had a significant negative mean difference in standardized scores compared to private school faculty. Faculty from institutions considered Historically Black Colleges and Universities had a positive mean difference in CMV scores compared to non-HBCU faculty; however, this statistic was not significant. Finally, faculty from institutions with a higher mean score for the priority of civic engagement scored significantly higher on CMV scores, though the strength was small with a 0.025 standard deviation increase.

The impact of institutional variables on Civic Minded Practice scores was very similar to the impact on CMV scores in three areas, but very different in a fourth. Once again, being a member of faculty in Master's institutions had significant positive impact on the mean difference in CMP scores compared to faculty from Doctoral/Research institutions. Regarding HBCU status, faculty from these institutions did have higher CMP scores, but, once again, it was not a significant value. Mean institutional scores on the priority of civic engagement also had a significant positive relationship on CMP scores. A distinctive difference between CMV and CMP scores was seen in the variable of institutional control. Faculty from public institutions had a small but significant positive mean difference in CMP scores compared to private faculty. This increase was in contrast to CMV scores, wherein public faculty had a significant negative difference compared to private faculty. As with the CMV scores, faculty from institutions with a higher mean score for the priority on civic engagement scored significantly higher on CMP scores. The strength of this measurement was again small, with a 0.019 standard deviation increase.

- 4. What is the relationship of a faculty engagement model that includes personal, professional, and institutional factors on the engagement values and practices of faculty members?*

The final research question examined all the dimensions of the Faculty Engagement Model in one comprehensive multilevel model that included the personal, professional, and institutional variables. The impact of those variable categories on Civic Minded Values and Civic Minded Practices have been discussed above in the three previous research questions. As previously discussed, in regard to model fit, the inclusion of the variables from each added dimension improved the fit for both full models. The values for the intraclass correlation coefficient (ICC) indicated that 3.1% of the variability in Civic Minded Values can be attributed to differences between institutions, while 5.4% of the variability in Civic Minded Practice can be attributed to the differences between institutions. The rest of the variation can be attributed to differences between individuals or other unstudied groupings. While those values may seem small, they are not trivial, and the models revealed the nesting of faculty within the institutions does have a significant impact on these scores.

Regarding the strength of the independent predictors, the impact of discipline as summarized by the Biglan categories had the largest positive impact on scores for both Civic Minded Values and Civic Minded Practice. The impact of race was also large and significantly positive for several minority groups compared to White/Caucasian faculty. Female gender was also revealed to have a significant positive impact for both full models. Finally, one of the largest and most significant institutional variables was seen in the mean differences for faculty from institutions Carnegie classified in the Master's group. The implication of all the observed differences revealed in both models are discussed more fully in the next chapter.

CHAPTER FIVE: DISCUSSION AND IMPLICATIONS

Introduction

The mission of higher education in the United States has traditionally rested on the three-legged stool of teaching, research, and service. This research study focused on the mission of service, or to use the more current language, the mission of engagement. Over the last quarter of a century, the importance of faculty work in the scholarship of engagement has prompted a renewed discussion. This discussion is particularly salient in light of current local and national desires for higher education institutions to partner with their communities to address the needs and issues of society. As such, it is important that we understand who the engaged scholar is, their role and work in engagement, and how institutions may support or hinder that work. Engagement is a complex issue that involves many facets, including the faculty member, the institution, the department or discipline, the community, and other influencing factors. This study sought to provide more understanding of some of these issues.

The purpose of this study was to examine the relationships between higher education faculty members' personal characteristics, professional characteristics, and institutional factors in relation to the faculty members' values and practices regarding faculty engagement. The theoretical foundation of this study and the research questions were based on the underlying concepts in Wade and Demb's (2009) Faculty Engagement Model. As noted earlier, while some of the factors that influence faculty engagement practices have been studied, the relationships and connections are not fully understood. Existing research has largely been isolated to studies that examine individual institutions in isolation. The strength of some influencing factors such as department or discipline have not been previously been studied in the depth needed to draw significant conclusions about

differences. This study used an expansive, cross-institutional sample of data from the nationally-recognized Faculty Survey at the Higher Education Research Institute (HERI) and the Cooperative Institutional Research Program (CIRP). The data set provided data on the kind of faculty and institutional diversity needed to examine these relationships more deeply. Not only does this study examine faculty engagement across institutions, it approaches the subject with a quantitative methodology that addresses the multilevel influences of the individual faculty member situated in his or her institution.

The preceding chapter reported the results of the statistical analyses conducted to examine the influences of personal characteristics, professional characteristics, and institutional influences on the engagement values and practices of faculty members. This chapter presents a summary of key findings coupled with a discussion and interpretation of those results in light of the research questions. This summary is followed by a discussion of the implications of the findings for theory as well as policy and practice. In addition, implications for future research are discussed before some concluding thoughts on engagement in higher education are offered.

Discussion of Findings

The major findings from this research resulted from using the statistical procedures of hierarchical linear modeling (HLM) with data gleaned from the 2013-14 Faculty Survey administered by the Higher Education Research Institute (HERI). HLM, or multilevel modeling, is a method that accounts for hierarchical, or nested, levels of data. In this particular case, the analyses produced two-level, random-intercept models in which faculty members were nested within their institutions. The following discussion is based upon the results of the full models developed for the constructs of Civic Minded Practice (CMP), a

measure of the faculty involvement in civic activities, and Civic Minded Values (CMV), a measure of the extent to which faculty believe civic engagement is a central part of the college mission.

The first research question asked, “What is the relationship between the personal faculty characteristics of gender, race, and age on the engagement values and practices of faculty members?” This question focused on factors in the personal dimension of Wade and Demb’s (2009) Faculty Engagement Model. Previous research indicated that female faculty are more likely to participate in and promote engaged scholarship activities than male faculty (Antonio et al., 2000; Lunsford & Omae, 2011; O’Meara, 2002; Vogelgesang et al., 2010). The results from this research also revealed differences based on gender. Female faculty scored significantly higher on both CMV and CMP scores than male faculty members. Of note, the strength of the positive impact of female gender was higher on CMV scores than CMP scores. Female faculty scored higher by 0.326 standardized deviations (SD) on the construct measuring values and only 0.114 SD higher on the construct measuring practice, a difference in value of almost a factor of three. One possible interpretation of this difference is while female faculty appear to value engagement more than their male counterparts, other contributing factors may prevent them from putting this value into practice to the extent that they truly desire.

Some research has indicated that when personal and professional characteristics are controlled for, gender and service did not exhibit the same strong correlations (Antonio et al., 2000). O’Meara et al. (2011) found that in large-scale studies, there is “less obvious discrepancy in engagement activity when one controls for such factors as career stage, institutional type, discipline, and the epistemological beliefs of the faculty” (p. 86). The

results of this research, however, appear to question that premise. The inclusion of several professional and institutional factors in the final models did not affect the impact of gender on values or practices compared to Level 1 models. There was little impact on the mean differences in CMV or CMP scores between models. One area that gender was not controlled for, however, is the impact of epistemological beliefs, which may influence the impact of gender on engagement values and practices. Some previous research has shown that a faculty member's approach to epistemology can be an important factor in community engagement, as faculty with more constructivist and less empirical views of knowledge creation tend to be more engaged (Colbeck & Wharton-Michael, 2006; Vogelgesang et al., 2010). It is not known if gender differences in engagement still exist if controlled for by epistemological differences.

Race or ethnicity was the second of the personal variables analyzed. Previous research indicated that faculty of color were more likely to participate in engagement activities than white faculty (Antonio et al., 2000; Baez, 2000; Demb & Wade, 2009; Vogelgesang et al., 2010). The results of this research largely confirmed the influence of race. Being a faculty member who identified as Black, Native American or Alaskan, Asian or Pacific Islander, Latino, and Other races was found to have a significant positive relationship on value scores compared to White/Caucasian faculty. The same positive relationship was seen on practice scores for Black, Native American or Alaskan, Latino, and Other races. Being Asian or Pacific Islander did not significantly have an impact practice scores as it did for values scores. The racial group that had the largest difference in standardized scores for both values and practices compared to White/Caucasian faculty was Native American or Alaskan Natives. One item of particular interest was found in the results based on ethnicity:

while being a faculty member who identified as Multiracial did not have significant impact on values scores, Multiracial faculty scored significantly lower on practice scores than White/Caucasian faculty. This difference was the only significant negative relationship that was seen in the ethnicity variable. Lunsford and Omae (2011) had noted White faculty were more likely than faculty of color to generate scholarship of their engagement activity; however, this study did not allow for a more thorough examination of that relationship.

Age was the final personal variable that was included in the HLM models. In the models for Civic Minded Values, age was not found to be a significant factor. Age was, however, found to have a very significant positive correlation with Civic Minded Practice scores. A one-year increase in age was associated with a score increase of 0.07 standard deviations per year, an increase that would grow quite large as faculty matured. The relationship is not linear, however, and the association would likely become weaker and reach a plateau of sorts as faculty members get older. This influence was not found to be moderated by the inclusion of the Level 2 institutional variables, as the strength of the association due to age was practically equivalent between the Level 1 model and the full model. This increase in practice scores might be indicative of a faculty member choosing to be more involved in service and engagement as their career advances and being less controlled by issues of promotion and tenure or disciplinary influences. Another possible explanation for this increase in engagement practices with age might be related to work-life balance and changes later in life. Faculty members who have children might increase time spent on work-related experiences as their children mature or leave home, allowing them to make time for new commitments. A third possible explanation for increased practice with age might simply be a growth in faculty experience and resources. For example, older faculty

are sometimes able to build a research or teaching structure in which graduate students aid in their work, thus allowing more time for the individual faculty member to be more creative in their engagement and broader impacts experiences.

The second research question asked, “What is the relationship of the professional faculty characteristics of rank, tenure status, and departmental field on the engagement values and practices of faculty members?” This question focused on some of the variables in the professional dimension of the Faculty Engagement Model. Some research has indicated that lower-ranking faculty members generally demonstrate higher levels of engagement activity (Antonio et al., 2000; Vogelgesang et al., 2010). The results of this study were mixed in comparison to previous research. Faculty members at the Associate and Assistant Professor levels were found to have significantly higher scores on Civic Minded Values than Full Professors, though the magnitude of the difference was quite small. Faculty at the Lecturer/Instructor level, however, did not differ significantly in scores from Full Professors. This finding was in direct contrast to the results of Vogelgesang et al. (2010), who specifically noted positive differences at the Lecturer/Instructor level. In regard to practice scores, however, faculty rank had no statistically significant relationship.

In regard to tenure status, the previous research was somewhat mixed. Antonio et al. (2000) noted that non-tenure track faculty are more likely to engage in community service and engagement work. In contrast, Abes, Jackson, and Jones (2002) found that among those faculty members not already involved in service-learning, junior and non-tenured track faculty are the least likely to begin participation. The results of the current study revealed that untenured faculty placed a higher value on engagement than their tenured peers for each subgroup in comparison to tenured faculty. Regarding engagement practices, each untenured

subgroup also had a positive association with more frequent engagement activities than tenured faculty, though the positive relationship for faculty with no tenure system was not found to be significant. Looking more closely at tenure subgroups in respect to engagement values, faculty on a tenure track had a mean difference of 0.09 standard deviations compared to tenured faculty. In contrast, faculty not on a tenure track had a mean difference of 0.15 SD in value scores, and faculty with no tenure system had a positive mean difference of 0.19 SD. The magnitude of the difference between those on a tenure track as opposed to those who are not suggests the tenure process may be influencing these engagement values.

Demb and Wade's (2012) research spoke to the mixed impact of rank and tenure status in their earlier study, noting participation in engagement activities appeared to vary by the type of activity. One possible reason for this variation was speculated to be the influence of discipline. Department field or discipline was the third variable analyzed at the professional level. Previous research has indicated that a faculty member's discipline or departmental affiliation does influence faculty engagement (Antonio et al., 2000; Braxton & Luckey, 2010; Vogelgesang et al., 2010; Wade & Demb, 2009). Antonio et al. (2000) found faculty in the social sciences to be the most engaged and those in the physical sciences, English, and the humanities to be the least engaged. Braxton and Luckey (2010) also found those in the social sciences to be more engaged. Vogelgesang et al. (2010) found faculty in the fields of education, forestry/agriculture, and the health sciences to be more engaged and those in math/statistics, humanities, and English to be less engaged. Demb and Wade (2012) found the highest levels of engagement with faculty in social work, education, human ecology, and agriculture.

This research provided some interesting and significant results regarding differences by discipline. As described earlier, Biglan's (1973) classification scheme was used to group departments into one of four categories, plus a catch-all other category: hard-pure disciplines (i.e. biology, physics, mathematics), hard-applied (agriculture, engineering, health), soft-pure (i.e. English, humanities), and soft-applied (i.e. business, education). In these models, faculty from the Biglan categories of hard-applied, soft-pure, soft-applied, and the other category all scored significantly higher on both Civic Minded Values and Civic Minded Practice scores than did faculty from the hard-pure disciplines. These results confirm previous research that faculty in the hard-pure disciplines are often the least likely to show interest in engagement activities (Doberneck & Schweitzer, 2017). Faculty in the soft-pure disciplines showed the least increase in mean differences in standardized values and practice scores, but the positive associations were still significant compared to the hard-pure disciplines. Faculty in the hard-applied disciplines showed the greatest positive mean differences in values and practices scores compared to those in hard-pure disciplines, followed by the magnitude of the mean differences in soft-applied disciplines. The results of this study in regard to disciplines parallels what was found by Doberneck and Schweitzer (2017); however, their study only followed the faculty of one research-intensive, land-grant institution as opposed to this study, which included faculty from 293 diverse institutions. On a final note, the magnitude of the mean differences in values and practice scores did not differ greatly from the Level 1 and Level 2 models on both constructs, suggesting these variables were not greatly impacted by the inclusion of institutional predictors in the models. Discipline appears to be very strongly associated with faculty engagement values and practices.

The third research question asked, “What is the relationship of the institutional characteristics of institutional type and perceived institutional support of engagement on the engagement values and practices of faculty members?” This question focused on variables included in Level 2 of the models and considered part of the institutional dimension of the Faculty Engagement Model. The institutional variables included Carnegie classification, institutional control (public or private), the HBCU status, and institutional priority on civic engagement. The Carnegie Foundation’s Basic Classification scheme does not refer to the specialized Community Engagement Elective that institutions may voluntarily choose to pursue (previously described in the literature review). The Basic Classification is the traditional framework used by Carnegie to classify U.S. institutions by type and size (Carnegie Classification, 2018). For the purpose of this analysis, the eleven classifications were collapsed into the following four categories: Doctoral/Research Universities, Master’s Colleges and Universities, Baccalaureate Colleges, and Other institutions. The model variable representing Basic Carnegie Classification was only found to be significant for institutions classified as Master’s Colleges and Universities. Being faculty in these institutions was positively associated with higher scores on both Civic Minded Values and Civic Minded Practice compared to being faculty in Doctoral/Research institutions. The models revealed a small but insignificant positive relationship for faculty from Baccalaureate and Other institutions. It is speculated the positive differences in scores for faculty from Master’s institutions is related to the added research pressures of many Doctoral/Research institutions. The increased research pressures may reflect downward pressure on engagement values and practices at these institutions. Another possible explanation relates to possible self-selection bias, as faculty who wish to pursue engagement scholarship may choose to

serve at Master level institutions with a stronger focus on teaching and service, thus avoiding the time demands of the research institution.

The second variable at the institutional level was institutional control, whether the college or university was public or private. Faculty from public universities were found to score significantly lower than faculty from private universities on scores for Civic Minded Values. The difference was moderate, measured at 0.125 standard deviations less than private faculty, but given the economics of higher education and the pressures of public universities to serve their communities, the results were somewhat unexpected. In regard to Civic Minded Practice scores, however, faculty from public institutions scored significantly higher than those from private institutions. While the measure of public school faculty's values and beliefs was less than their private colleagues', when it came to measures of civic engagement practice, the relationship was reversed, and public faculty revealed a stronger tendency to engage in this form of activity. This marked difference between public and private faculty associations with engagement value and practices invites some speculation. One possible explanation is, once again, related to self-selection bias. Faculty who tend to be more engagement minded may choose to serve at private institutions, where the lack of pressure from local or state government funding and/or oversight may allow them more academic freedom to pursue the engagement opportunities of their choice. Why then, would engagement activity and practice be greater at public institutions? In this case, the demands of public funding sources and the external pressures at these institutions may motivate some faculty members to be more engaged than they would normally choose to be.

It was unknown whether being a faculty member at Historically Black Colleges and Universities (HBCUs) would have an impact on engagement values and practices. Based on

the previous literature that indicated minority faculty were more engaged, a reasonable assumption would be that HBCU faculty would tend to be more engaged than non-HBCU faculty. These results revealed that faculty from HBCU institutions did score higher on both engagement value and practice scores; however, the results were not significant. The lack of significance may be in part due to the small number of HBCU institutions included in the data sample. Only 94 faculty members were from one HBCU institution, representing less than 1% of the entire sample.

The final predictor from the institutional dimension of the model was a variable that measured the institution's priority on civic engagement. Jaeger and Thornton (2006) found the perception of public service at an institution was a greater barrier to faculty engagement than even policy and practice. Demb and Wade (2012) also spoke to the importance of perception and institutions making their engagement intentions clear in areas such as mission statements, reward systems, and infrastructure support. O'Meara (2002) found institutional commitment had a positive effect on community engagement and engaged scholarship. Having a focused and positive approach to engagement is driven by leadership, an aspect cited numerous times in the literature (Chambers & Gopaul, 2010; Sandmann & Plater, 2009; Weerts & Sandmann, 2008). A culture that places a priority service and engagement and disseminates positive messages about such engagement would, therefore, be more likely to have faculty who value and practice engagement. The results of this research did support this previous literature. Institutional Priority on Civic Engagement was significantly associated with Civic Minded Values and Civic Minded Practice scores. While the magnitude of the relationship was small, the results do support the notion that the university culture and leadership support do make a difference in the level of faculty engagement.

The final research question asked, “What is the relationship of a faculty engagement model that includes personal, professional, and institutional factors on the engagement values and practices of faculty members?” The purpose of this question was to consider all the predictor variables in one multilevel model that included select elements of Wade and Demb’s (2009) Faculty Engagement Model in one comprehensive model. How does a model that includes factors from all three dimensions help to understand engagement values and practices? The original conceptual model was initially tested on only one institution, so this study provided the opportunity for a broader analysis across multiple institutions. Previous research had also not analyzed the interactions within a multilevel framework. The use of the hierarchical linear modeling techniques allowed the relationships to be analyzed while accounting for the fact that individual faculty are nested within institutions that may influence engagement values and practices. On another related note, previous research had speculated that personal characteristics may not carry as much weight as some of the disciplinary and institutional factors, including perceived institutional commitment (Vogelgesang et al., 2010; Demb & Wade, 2012). This multilevel model allowed for a comparison of factors from all three dimensions.

Regarding the models as a whole and their ability to explain the relationships, the fit did improve on both Civic Minded Values and Civic Minded Practice from the null models to the Level 1 models that included the personal and professional variables. This fit improved again when a second level of institutional variables were added to the full models. This evaluation of fit is based upon the decreasing statistical values of log likelihood (LL), the Akaike information criterion (AIC), and the Bayesian information criterion (BIC) as described in Table 4.7. As noted previously by Robson and Pevalin (2016), “The model fit

statistics are generally measuring whether the ‘lack of fit’ of a model is improving” (p. 58).

Based upon these statistics, the comprehensive models did improve with each subsequent step. These models reveal the complex nature of understanding faculty engagement values and practices and identified the many influencing factors operating on multiple levels. It should be noted, however, that the analysis was not able to fully test Wade and Demb’s (2009) Faculty Engagement Model as the HERI data did not provide all the numerous factors described in the original model, previously outlined in Figure 1.

Also, as previously discussed, one of the most common ways to evaluate a multilevel model is with the intraclass correlation coefficient (ICC). The ICC tells how much of the variation in the dependent variable can be attributed to differences between the Level 2 variable (college or university). An ICC of zero or close to zero indicates there is no evidence of nesting effects in the data. Early tests of the null models for both engagement values and practice revealed the significance of clustering at the institutional level. The HLM methodology was a worthy pursuit and revealed the importance of the Faculty Engagement Model’s institutional dimension. The ICC value for the full model of Civic Minded Values indicated that 3.1% of the variability in faculty scores can be attributed to the differences between institutions. The ICC value for Civic Minded Practice was slightly higher, as the full model indicated that 5.4% of the variability in faculty scores can be attributed to the differences between institutions. What do these ICC values tell us as they appear to be rather small? There is no hard and fast rule in regard to how large an ICC score needs to be in order to determine how important clustering effects are. Though the values account for small percentages of the variance in scores, they are not trivial or insignificant. Institutional grouping does have a significant influence on individual faculty engagement values and

practices. The low ICC values do tell us, however, that the majority of variance in engagement scores is attributable to something else besides institution, either the differences in individuals or some unexplored grouping effect.

Finally, examining the full models tells us which of the predictors appear to have the greatest impact on engagement values and scores. As previous literature had suggested, female faculty were much more likely to value and practice engagement than their male counterparts (Antonio et al., 2000; Lunsford & Omae, 2011; O'Meara, 2002; Vogelgesang, 2010). Ethnicity was also found to have a large and significant impact on both values and practices compared to White/Caucasian faculty, particularly for those who identified as Black, Native American or Alaskan, and Latino. While there were some significant associations between engagement value scores and both academic rank and tenure status, the influence was small to moderate. The significance of rank and tenure largely disappeared, however, when examining engagement practices. This result revealed that while faculty below full professorship and full tenure may hold civic minded engagement in higher regard, when it comes to putting these values into practice, their actions do not differ greatly from fully tenured professors. The impact of discipline as measured by the Biglan categories examined in this study had large and significant associations with both engagement values and scores. All of the comparison groups scored significantly higher compared to the hard-pure disciplines. The magnitude of these differences was particularly large for both the hard-applied and soft-applied disciplines, though soft-pure disciplines also scored higher than hard-pure disciplines. These Biglan relationships suggest that departmental influence may play a larger role than institutional influence, an area that is further discussed with implications.

Implications for Theory

The guiding theory behind this study was the Faculty Engagement Model (FEM) developed by Wade and Demb (2009). Their work largely drew from a review of previous literature in the engagement field, particularly that of the Holland Matrix (1997), the Kellogg Commission (1999), and Colbeck and Wharton-Michael's (2006) conceptual model for faculty motivation and engagement. The result was the FEM, a model based on three primary sets of factors believed to impact engagement: personal, professional, and institutional. As described earlier, the authors of the FEM said, "The model contributes to the identification of a research agenda related to engagement and creates a context within which institutional leaders may consider policies and programs to enhance faculty involvement in engagement" (p. 13). Access to the HERI data used in this study set the stage to pursue this research agenda. The data set did not allow for a model that focused on all of the possible factors in the Faculty Engagement Model; however, the variables that were included did fit within one of the three dimensions of the original model. The results of the multilevel models produced in this study do allow for some commentary on Wade and Demb's theoretical framework.

In regard to the personal dimension, results confirm the inclusion of gender and ethnicity as significant engagement factors. As stated earlier, the previous literature had largely pointed to the belief that females and minority faculty tend to be more committed to engagement practices. This study added to the strength of that belief by evaluating the predictors across a large, diverse, and multi-institutional set of faculty; previous studies in the literature had largely looked at only individual institutions. What is not explicitly answered in this study is why females and faculty of color tend to be more engaged. Are there social or epistemological reasons why these characteristics lend themselves to both valuing and

practicing engagement? It may be speculated that because we live in society that tends to be more patriarchal that females feel more inclined to give back to the community and supportive of disadvantaged groups. The same could be argued for faculty of color, who may engage in order to help others with greater needs or obstacles. The reasons behind these trends are not addressed in this study, but worthy of additional consideration.

The personal variable of age provided mixed results depending on what aspect of engagement was analyzed. Age was not found to be a significantly associated with Civic Minded Values. This result suggests that a faculty member's beliefs about engagement as a central part of the college mission do not change much over time. Perhaps these beliefs are established early in life, during the graduate school experience or even before. This idea parallels what O'Meara (2002) suggested, that faculty socialization of behaviors begins in graduate school and continues in the early stages of the career. Other research has noted that faculty interest in engagement is often squelched in these early professional stages (Ellison & Eatman, 2008; Jaeger & Thornton, 2006). Civic Minded Practice, however, was found to be positively associated with age. Despite the models showing little changes in engagement values as faculty age, involvement in engagement practices does increase year by year, leveling out in the latter stages of career. This difference between values and practice is likely related to other key variables such as rank, tenure, or discipline. It may be that as faculty mature and become more comfortable or secure in their roles, they chose to be more active in civic engagement, if it is a value they have held but been unable to pursue. This positive association with age and engagement practice may be connected to DeFelippo and Giles' (2015) research that associated rates of mid-career faculty engagement participation with increases in vitality and a desire to be involved in more meaningful work.

The results of this study also speak to some of the theoretical aspects of the Faculty Engagement Model's professional dimension. The variable of academic rank offered mixed results in explaining the associations with engagement values and practices. Academic rank was found to have a significant association for associate and assistant professors in regard to civic minded values; however, no significance association was found for any academic rank category on scores for engagement practice. Does this difference tell us anything about the theoretical influence of academic rank on engagement? I speculate it may have more to do with departmental influence and institutional promotion and tenure policies. Junior faculty appear to have stronger beliefs about civic engagement, but the beliefs were not manifested in engagement practices. If we were to dig deeper, we may find the departmental pressures and rigid structures of promotion and tenure may squelch the ability to be involved in engagement despite the strong beliefs in its value. With respect to tenure, it was found to have a positive association with Civic Minded Values for each subgroup compared to fully-tenured faculty. For Civic Minded Practice, tenure status had a positive association with scores for those on a tenure track and those not on a tenure track; those with no tenure system had a positive but non-significant relationship. Returning to the Faculty Engagement model, it may be that the primary focus of this professional dimension needs to be more on faculty tenure status rather than academic rank, though in practicality, the two factors are intimately intertwined and difficult to separate.

Regarding the institutional dimension of the Faculty Engagement Model, this study focused on factors related to what Wade and Demb (2009) described as institutional structure, type, or prestige. Examining the type or structure using the basic Carnegie Classification scheme, this study found mixed results. Institutions designated as Master's

colleges or universities had a significant positive impact on faculty engagement values and practices compared to faculty at doctoral or research institutions; however, those classified as Baccalaureate institutions had no significant relationship. One possible reason for the positive relationship for Master's institutions compared to doctoral/research institutions could be decreased pressure or expectations surrounding research activities (grants, publications, etc.) and more of a focus on teaching and service. It is also speculated that self-selection bias may be in play, as faculty who are more inclined to engagement may choose to not work under the intense publish or perish environment of Doctoral/Research institutions. If this was the only reason behind a positive relationship in Master's faculty scores, however, it is possible there would be the same kind of positive association with Baccalaureate faculty. Another possible explanation for the Master's influence is these institutions tend to be more locally or regionally focused, which would lend itself to more civic partnerships and engagement. As an anecdotal exploration into this association, I examined the Carnegie Master's institutions in my home state, North Carolina, of which there were eight. Of these eight institutions, the five public institutions all had earned the Carnegie elective classification for Community Engagement, while one of the three private institutions had earned that designation as well. This quick overview does suggest these types of Master's institutions may have a more engaged focus, though this association in the models' results is one that requires further exploration and study. In terms of institutional type, with regard to institutional control being public or private, this study found very mixed results as noted early. Public faculty were associated with lower engagement value scores but associated with higher engagement practice scores. Once again, self-selection bias may be playing a role in these differences, with faculty holding higher engagement values choosing to work within a

private institution environment. Should institutional type with respect to public or private control, therefore, be considered a significant factor in the theory supporting the institutional dimension? Once again, it depends on the focus of conversation, as these results found it to be true for practice but not for beliefs. This study suggests we need to dig deeper into this issue and why the relationships between values and practice do not align between the groups.

Implications for Policy and Practice

This study informs higher education policy and practice in several ways. The majority of these implications lend themselves to the development of policies, strategies, and interventions institutions can put into place to support engaged faculty. Before going in-depth with these suggestions, it is acknowledged that changes to policies and practices are messy and complicated, particularly for institutions as large and complex as higher education colleges and universities. Systemic change is difficult, as changes to many practices must overcome the inertia of tradition. Some suggestions may be more top-down, while others are rooted at the grassroots level of faculty and departments. Nevertheless, this study provides insight into several areas where change would be helpful.

This study confirmed that female and minority faculty exhibit strong beliefs and values in civic engagement, and those groups also tend to translate those values into more engagement activity. This fact alone should encourage campuses who wish to create an engaged culture to focus on hiring practices that increases staff diversity and hires more female faculty and faculty of color. In many places, however, the struggles of the promotion and tenure process and the struggles of female and minority faculty within that process may potentially squelch those engagement desires and actions. Female and minority faculty are often forced to set aside their engagement interests in order to struggle through a promotion

and tenure process that, in many places, does still not value and reward engagement scholarship. Otherwise, this conflict means that the faculty members who are most vulnerable in the promotion and tenure process are engaged in academic pursuits that are the least rewarded by their majority counterparts. These challenges in the promotion and tenure process actually provide insight into a second, alternative perspective for female or minority faculty. Should women and faculty of color actually do less engagement in order to gain equal footing with their male Caucasian counterparts? If the current system does not reward engagement practices, women and minorities may actually harm their promotion and tenure pursuits by doing engagement work. It is a difficult question to answer, but one that must be considered. Until the promotion and tenure policies recognize and reward all forms of scholarship, many females and minorities have to struggle to navigate the system.

Despite almost two decades of discussion since the Kellogg Commission (1999) urged campuses to return to their engaged roots, when we look at faculty time allocation, the trends show more hours spent on research and less on service (Jackson et al., 2015; Link, Swann, & Bozeman, 2008). As described earlier, as long as faculty on the margins (i.e., women, minorities) are the only ones supporting community engagement, then the practice itself will remain marginalized (Ward, 2003). This discrepancy speaks to not only putting policies into place that diversifies the staff, so engagement work is more prominent within the university culture, but also to bringing all faculty along this journey. Institutions should provide awareness and training for tenure committees, department chairs, mentors, and new faculty members that emphasizes the value and importance of engaged scholarship. Advances in this area will help level the playing field for all faculty members and their various forms of scholarship. Engagement should not be something only female and minority

faculty participate in, but an opportunity for new forms of scholarship that larger percentages of male and White/Caucasian faculty choose to prioritize and pursue as well. Just as a rising tide lifts all boats, changes to promotion and tenure policies in regard to engagement should provide all faculty increased opportunities.

Promotion and tenure policy is a complex dimension as it relates to faculty engagement. The processes and policies of promotion and tenure in some ways blur the lines of Wade and Demb's (2009) Faculty Engagement Model. On one hand, tenure operates within the personal dimension of the FEM, in that it is an individual pursuit within the institutional structure. Thus, when faculty make early career stage decisions about what disciplines to pursue or at what institutions to work, they are making personal choices knowing how engagement work is valued within the promotion and tenure process within a discipline or institution. On the other hand, tenure choices and influences operate within the professional and institutional dimensions of the FEM as well. The nature of what is valued in the promotion and tenure process is a function of the professional dimension and institutional priorities. Faculty are at the intersection of this crossroads between the personal, professional, and institutional. They are the ones most impacted by the promotion and tenure policies. If institutions truly value research, teaching, and service, then it is not fair to ask faculty members to set aside engagement interests because they stymie career advancement. In examining the associations with rank, this study found that faculty whose academic rank was less than full professor had higher engagement values; however, that positive association disappeared when examining the association between faculty rank and actual engagement practice. What is causing the disconnect? The natural assumption is that promotion and tenure policies suppress the ability of faculty who value engagement to put these values into

practice. As promotion and tenure policies are firmly rooted and established at the departmental and institutional levels, leadership needs to make a concerted effort to change these policies. More specifically, institutions need to learn and be taught to recognize and value examples of engaged scholarship. Awareness training that recognizes the forms of engaged scholarship is needed, particularly for department chairs and tenure committee members. This step is where organizations such as the APLU and the Engaged Scholarship Consortium can help in offering professional development that helps institutions learn to recognize and reward these forms of scholarship. Much can be learned from leading institutions such as Michigan State and the example of their office University Outreach and Engagement and use of the Outreach and Engagement Measurement Instrument. The opportunities for institutions to learn from the engagement leadership of others is available, yet university leadership must take the next step to establish similar cultures at their institutions so engagement is more than just words in a mission statement.

The results of this study revealed strong associations between departmental and disciplinary factors and engagement values and practices. These disciplinary influences speak to some possible changes needed in institutional policy and practice. This study examined the associations from the broader perspective of the Biglan classification scheme, looking at the categories of hard-pure, soft-pure, hard-applied, and soft-applied. Faculty in both the hard-applied and soft-applied disciplines had some of the highest associations with engagement values and practices. In some ways, this is to be expected, as the nature of those applied disciplines provides more opportunities for community work and interactions than the categories described as pure. Hard or soft-applied disciplines such as agriculture, health, education, and the social sciences naturally lend themselves to university and community

partnerships and the mutually-beneficial applications of learning and service. A good example of this is the cooperative extension work that occurs at many land-grant institutions. The hard-pure and soft-pure disciplines lagged behind the applied disciplines in regard to values and practice, though even faculty in the soft-pure category were found to be significantly more engaged than faculty in hard-pure.

What do these disciplinary differences mean in terms of policy and practice? What changes do institutions need to put in place? In light of these disciplinary variations, it is apparent that “one size fits all” policies for promotion and tenure are not adequate at institutions. The promotion and tenure policies for a faculty member in chemistry or physics should not look the same as those for a faculty member in engineering or agriculture or science education. The types of engagement scholarship that someone in the fields of health science or psychiatry will look different from the examples of a faculty member in education or counseling. There are opportunities for engagement in any of these fields; however, the examples are very diverse and a boilerplate rubric that applies across an institution and all faculty cannot adequately evaluate the differences. Doberneck and Schweitzer (2017) recently noted, “Perhaps the time has come to adopt a more nuanced approach where the disciplinary variations and diversity of publicly engaged scholarship are recognized, celebrated, and encouraged in both policy and practice” (p. 98). The results of this study affirm that time does appear to be at hand.

It should be noted that these disciplinary differences as well as the current policies and practices are likely deeply rooted. They will not be easily changed as decades of tradition and socialization pressures are at their core. As the literature has noted, these disciplinary socialization pressures often begin in graduate school (O’Meara, 2002). Wade and Demb

(2009) noted the socialization pressures build disciplinary norms that impact engagement values and practices. But perhaps the new century and a changing of the guard offer the opportunity for a fresh perspective. Holland (2016) recently reflected on her previous work in the field of engagement and what has changed in the last twenty years. She noted today's faculty is more diverse, as Baby Boomers are being replaced with those from Generations X and Y, a culture that has had more experiences in service learning, community engagement, and is looking for a collaborate environment. Perhaps this transformation will put the needed pressure on leadership for continued change. The nexus may rise up from the department and disciplinary level, as these faculty members continue to explore opportunities for engaged scholarship. As Boyer (1996) first noted, if service is an important university mission alongside research and teaching, then the scholarship of engagement needs to be valued as well at the departmental level. To impact engagement policies, the institution needs more creative and distinctive approaches and recognize the diverse opportunities at the disciplinary levels.

A key strategy that will aid institutions in creating this culture of engagement is going to be focused and targeted professional development and further development of evaluation instruments. For departments, disciplines, and institutions to value high quality engaged scholarship, many still need to be taught how to recognize these artifacts. The traditional peer reviewed journal publication and research grant values are not broad enough to capture this work. The Carnegie Foundation system and the optional Community Engagement Elective is a good starting point for this conversation. The elective needs to be more than a goal for an institution to achieve and list in a strategic plan. It needs to be translated into policies that recognize and reward faculty engagement work. The Carnegie engagement classification is

an excellent starting point, particularly with the foundational indicators and categories of community engagement. We now need to see that work filter through to instruments and frameworks of evaluation that can be used at the faculty level, just as the OEMI is used at Michigan State (Lunsford et al., 2006). Further work is needed in this area, as the development of better evaluation tools is a critical policy and practice task. This need was recently outlined by O'Meara, Eatman, and Petersen (2015), who provided a template on how to address these issues. They argued for better criteria to be used to evaluate engaged scholarship in the areas of peer review, impact, and significance. Regarding peer review, they noted the process should be inclusive of community partners and may need to include faculty members from outside the institution, provided they are experience in engaged scholarship. They also noted documentation and evidence need to be gleaned from more than publication in peer-reviewed journals, and evaluation tools need to be put into place to help promotion and tenure guidelines recognize these scholarly products.

As noted throughout these implications, greater awareness and training is needed at all levels, from the individual faculty member to the tenure committee member to the department head on up to the provost or president's office. However, awareness alone is not enough to change the values and practices of a higher education institution. For these changes to have a lasting impact and be rooted at a systemic level they must be put in written policies and enforced by university leadership. One challenge is that while promotion and tenure policies and procedures may be written and guided from a top-down administrative level, the actual practice of these policies is rooted in a peer evaluation or departmental level. Therefore, the tension between these levels must be navigated and a consistency and balance must be found in which the institution and department are on the same page when it comes to

recognizing and rewarding engagement work. National organizations can play a role in these changes, by providing data-driven processes that show how engagement scholarship should be recognized and evaluated. Accrediting organizations or national leaders such as the Carnegie Foundation can contribute to these processes. Institutions of higher education can also support this process and promote the value of engagement by providing resources and financial rewards for engaged faculty. It is often said if you want to know what someone or an organization values, examine where the money goes. An example of how an institution may put this value into practice is by providing financial rewards to engaged faculty through the return of indirect or overhead costs to support engaged work to communities, an idea which could also be incorporated into incentive grants for engagement proposals.

A final area of policy and practice that this study speaks to is in regard to leadership. The variable of institutional priority on civic engagement revealed a positive association between engagement values and scores. That variable measured the extent to which faculty believe their institution is committed to facilitating civic engagement among students and faculty. This relationship speaks to the importance of culture and leadership. Jaeger and Thornton (2006) noted the perception of engagement can often stand as a greater barrier to faculty than actual policy and practice. This study confirms the importance of establishing that culture if engagement is to flourish. If the perception is that the institution is committed to and supportive of engagement, then faculty are more likely to adapt their practices to pursue this kind of service and scholarship. For that culture to be established, it not only needs to be explicit in university mission statements and strategic plans, but also in promotion and tenure policies, reward structures, and infrastructure that support this work. As noted by Saltmarsh (2017), “When institutional policies are silent on engagement, they create

disincentives for faculty to undertake community engagement across their faculty roles and often punish them when they do" (p. 11). This culture and infrastructure are established and nurtured by institutional leadership.

The literature shows that leadership sets the tone (Chambers & Gopaul, 2010; Sandmann & Plater, 2009; Weerts & Sandmann, 2008). The leadership actions need to be transformational and not just accommodating of engagement work. Holland (2016) said, "Going forward, we should see community engagement as core work; it is not an exotic activity for the few who have those motivations" (p. 79). Chancellors, presidents, and other senior leadership hold the keys to making engaged scholarship core work and not on the fringes. Institutional leadership needs to lead by example, immersing themselves and their institutions in community engagement partnerships that are mutually beneficial. Leadership may conduct periodic surveys or assessments of engagement work on their campus, similar to the work of Sobrero and Jayaratne (2014), in which they evaluate both the perception and policies of various department across campus. Periodic assessments of this kind would allow key leaders to address the needs of engaged scholars. Leadership also needs to commit resources to engaged work and establish campus markers that symbolize the importance of this area of scholarship. In addition to financial resources such as the return of overhead money previously mentioned, it may mean the establishment of a campus office of outreach and engagement, a key cabinet member or senior-level position who oversees campus engagement efforts, or even a campus wide committee or task force that maintains a focus on engagement work. An example of a campus symbol may include the establishment of an awards process that recognizes the outstanding work of engaged faculty.

Faculty need to see leadership engaged with the community themselves. They need to see leadership celebrating engaged scholarship at the local and national level. Just as individual faculty members can receive support through professional development, one suggestion is for professional development opportunities that target senior leadership, which once again could be facilitated by organizations such as APLU, the Carnegie Foundation, the Engaged Scholarship Consortium, and even accrediting agencies.

The policy and practice implications outlined as a result of this study would help advance the work of engaged scholars. Community engagement should be an integral part of the higher education mission; however, in many ways, it still lags behind the missions of research and teaching. Female and minority faculty have shown a desire to engage, yet they are still hampered by promotion and tenure policies. Greater awareness and training of key leaders will help alleviate this problem. Institutions need a greater understanding of the disciplinary differences of engaged faculty and find unique and differentiated ways to support the types of engaged work across multiple disciplines. Improved evaluation instruments are needed to help department heads and tenure committees recognize and reward this kind of work. Exemplars of the various scholarly artifacts produced beyond peer reviewed journals need to be shared with key leadership personnel, so they can recognize the significance of engaged scholarship. Most of this change will be driven by informed leadership that leads by example and establishes a culture in which institutions are actively engaged with their communities to meet the challenges of society.

Recommendations for Future Research

The results of this study offer implications for future engagement research. One of the more significant areas worthy of further exploration is the influence of disciplinary and

departmental factors. Discipline was one of the primary factors at the professional level of Wade and Demb's (2009) original model. Doberneck and Schweitzer's (2017) research recognized the disciplinary influences while examining data from one research-intensive, land-grant, Carnegie-engaged institution. This study took that to the next level and found similar disciplinary influences while examining thousands of faculty at hundreds of diverse institutions. The disciplinary variable described as Biglan classification was one of the largest influences on engagement values and practices alongside the associations with several minority ethnicities. The disciplinary influence suggests a few possible areas of study. Further research could drill down in the disciplinary categories, disaggregating the Biglan classifications to see the nuances in this variable at specific departmental levels. While the Biglan classification has stood the test of time, new disciplines have emerged and an increase in multidisciplinary and cross-disciplinary faculty appointments have been observed. It would be interesting to see if faculty in these new and more diverse fields have differences in engagement work. The data set used in this study included a large number of institutions, 293 to be exact. What would be interesting to see is if disciplinary variations in engagement values and practices remain the same based on institutional type, such as land-grant or HBCU status. As discussed earlier, individual faculty selection and socialization are likely playing roles in these disciplinary influences, as faculty who are more inclined to engagement may be drawn to disciplines which better support this work. Investigating the impact of these socialization pressures on discipline is worthy of future research.

In addition, it would be of further value to see if the role of promotion and tenure policies and practices impacts engagement values and practices in relation to disciplinary influences. Can measures of how engagement scholarship is valued during the tenure process

at the departmental level be captured and better used to understand the complex nature of faculty engagement within each discipline? If more specifics were known about each institution's promotion and tenure process, including the types of scholarship and artifacts that are valued, does that make a difference? For example, faculty in the hard-pure disciplines are traditionally associated with lower levels of engagement. However, can this be moderated with more engagement friendly promotion and tenure policies?

The disciplinary levels and their influences could also be used to develop a more complex model that more fully explains engagement values and practices. This study utilized a two-level hierarchical linear model that examined faculty nested within their institution. The model results found the grouping variable of institution accounted for approximately 3% of the variance in engagement values and 5% in engagement practices. While those values were significant, a three-level model of faculty nested within departments nested within the institutions may account for a larger portion of the variance in engagement values and practices. Evidence suggests the grouping effect of discipline and department may play a more significant role than the broader institutional effects.

Because of the anonymity required in the HERI data set, little was known about the some of the institutional characteristics that may contribute to the influence of the institutional dimension. It would be valuable to know several other institutional characteristics, possibly even merging the HERI data with data from a source such as the Integrated Postsecondary Education System (IPEDS). Little is known about the influence of the engagement resources of institutions in relation to faculty engagement practice, including dedicated resources for institutional engagement or the existence of a campus office of outreach and engagement. There are other characteristics worthy of further study that may

increase the variance explained by the institutional predictors. Earlier literature noted the history and the role of land-grant institutions in the service and engagement movement. The recent APLU (2015) report cited the gains in engagement activity, journals, and awards. Inclusion of land-grant status as an institutional variable would be of value in examining if land-grant missions, culture, and leadership have a positive influence on faculty engagement values and practices. The second institutional characteristics that would be worthy of inclusion and further study comes from the Carnegie Foundation. The HERI data provided information on the basic classification category for each of the 293 institutions included in the data set; however, it was not known if the institution had achieved the Community Engagement Elective. As noted earlier, 361 U.S. institutions have achieved this elective as of 2015, in a process that requires well-documented evidence that community engagement is an integral part of an institution's identity and culture. It would be of value to include achievement of this engagement elective in a study such as this to explore its influence on faculty engagement. Land-grant status and Carnegie status may also moderate the impact of disciplinary influences as discussed earlier.

This study did not find HBCU status to a significant predictor in the engagement models, despite the analysis showing it to be a positive predictor of values and practices. This lack of significance is likely due to the fact that only 94 faculty members, or less than 1% of the entire sample, were from HBCU institutions. The overwhelming evidence of the influence of race and ethnicity variables on an individual level, however, suggests HBCU status is worthy of further review. Additional research that includes a more representative sample of HBCU faculty and institutions could contribute to a better understanding of this institutional characteristic.

This study suggests one final implication for future research. A common perception is that faculty from public institutions are more likely to be involved in community engagement activities, particularly those that rely heavily on public funding. These pressures have increased in the 21st century, especially for public research institutions struggling to convince local communities of their utility and role (McDowell, 2003). In light of these pressures, this study's finding that public institution faculty scored significantly lower on engagement values and beliefs than private institutional faculty was surprising. This relationship did reverse in relation to engagement practices, as public faculty scored higher than private faculty. The findings in regard to values, however, are curious and worthy of additional study. If faculty from private schools do hold engagement values in beliefs in a higher regard, why do we not see this difference manifested in practice? Are faculty who are drawn to engagement more likely to seek positions at privately-controlled institutions? If so, why? Inherent in this issue is the problem of selection bias and attempting to understand how faculty chose where to pursue their academic activities and how that influences engagement values and beliefs.

Conclusion

The purpose of the study was to examine the relationships between higher education faculty members' personal characteristics, professional characteristics, and institutional factors, in relation to the faculty members' values and practices regarding faculty engagement. Faculty and their institutions have to balance the academic pursuits of teaching, research, and service. This study focused on the expanding mission of service, more commonly referred to as engagement in today's language, particularly when the activity involves the collaboration between institutions of higher education and their communities in

mutually-beneficial exchanges. To study these engagement factors, this research applied the concepts of Wade and Demb's (1999) Faculty Engagement Model to a multi-institutional data set of thousands of faculty members while using hierarchical linear modeling methods that allowed for the examination of these faculty nested within their colleges and universities.

The mission of service and engagement has often been portrayed as secondary to the institutional missions of teaching and research. This culture and perception have changed and evolved over the last quarter of a century, particularly as scholars such as Boyer (1996) and others brought the topic to the forefront again. In addition, leading organizations in higher education such as the Carnegie Foundation and the Association of Public and Land-grant Universities have sought to prioritize engagement scholarship. It is critical that we have a clearer understanding of what influences a faculty member's engagement values and practices at both the individual and institutional level in order to inform higher education's policies and practices in support of engagement. This need is all the more important in an age wherein the pressures on institutions to partner with their communities and help solve the challenges in society are ever-increasing.

This study advanced the engagement research agenda and helped bring more understanding to the complexity of faculty engagement work. The results confirmed the influence of female and minority faculty, who tend to both hold engagement in higher value and practice it at higher levels. It is important that institutions support their efforts. This study also revealed the influencing factors of rank and tenure status, which have long been stumbling blocks to the work of engaged scholars. It is critical that institutions of higher education continue to adapt and evolve their promotion and tenure processes so that engagement scholarship is as valued as research and teaching. Disciplinary status was found

to be a very strong and significant factor in the levels of engagement values and practices.

This study suggests the influences of disciplinary status is one worthy of further research that allows researchers to drill down into this complex issue. Finally, this study confirmed the significance of the institutional dimension and suggested why it is vital we understand issues of institutional culture and leadership to better support engaged faculty. Community engagement should be a foundational cornerstone of every institute of higher education. In many ways, engagement can be the thread that ties together the missions of teaching, research, and service. They no longer need to be seen as three separate areas of work but can work hand-in-hand to accomplish unified goals. This study advances that discussion as we grapple with understanding the work of engaged faculty.

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APPENDIX



HIGHER EDUCATION RESEARCH INSTITUTE AT UCLA
home of the COOPERATIVE INSTITUTIONAL RESEARCH PROGRAM

2013-14 HERI Faculty Survey

NOTE: The 2013-2014 HERI Faculty Survey is a web-based survey and therefore this document does not reflect the web-based formatting.

1. Please enter the four-digit year that each of the following occurred (e.g., 1974, 2001).

Year you received your first academic appointment _____

Year of academic appointment at present institution _____

2. What is your present academic rank?

Professor

Associate Professor

Assistant Professor

Lecturer

Instructor

3. Are you an adjunct faculty member at this institution?

Yes No

4. What is your tenure status at this institution?

Tenured

On tenure track, but not tenured

Not on tenure track, but institution has tenure system

Institution has no tenure system

IF TENURED, NESTED ITEM

- 4a. Please enter the four-digit year you received tenure (e.g., 1974, 2001). _____

COMMUNITY COLLEGE

These questions will only be included for community colleges, and will replace questions 2 and 3 when the survey is used by community colleges.

2. What is your current status at this institution?

Tenured

Probationary, Tenure Track

Renewable Contract Instructor (e.g., Adjunct)

IF TENURED, NESTED ITEM

- 2a. Please enter the four-digit year you received tenure (e.g., 1974, 2001). _____

3. What is your academic rank at this institution?

Acting Instructor

Instructor

Assistant Professor

Associate Professor

Professor

Emeritus

5. Your sex:

Male
Female

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

PART-TIME FACULTY

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

6a. If given the choice, I would prefer to work full-time at this institution.
 Yes No

6b. Have you ever sought a full-time teaching position at this or another institution?
 Yes No

IF YES, NESTED ITEM

6bi. How long ago did you pursue a full-time position?

Currently seeking a position
 Within the last year
 1 to 2 years ago
 3 to 5 years ago
 More than 5 years ago

6c. Is your full-time professional career outside academia?
 Yes No

6d. In considering your reasons for teaching part-time at this institution, please indicate your agreement with the following statements:

(Responses: Agree Strongly, Agree Somewhat, Disagree Somewhat, Disagree Strongly)

My part-time position is an important source of income for me
 Compensation is not a major consideration in my decision to teach part-time
 Part-time teaching is a stepping-stone to a full-time position
 My part-time position provides benefits (e.g., health insurance, retirement) that I need
 Teaching part-time fits my current lifestyle
 Full-time positions were not available
 My expertise in my chosen profession is relevant to the course(s) I teach

6e. Mark all institutional resources available to you in your last term as part-time faculty. (Mark all that apply)

Use of private office
 Shared office space
 A personal computer
 An email account
 A phone/voicemail
 Professional development funds
 Printer access (i.e., free printing)

6f. Please indicate your agreement with the following statements:

(Responses: Agree Strongly, Agree Somewhat, Disagree Somewhat, Disagree Strongly)

Part-time instructors at this institution:

- Are given specific training before teaching
- Rarely get hired into full-time positions
- Receive respect from students
- Are primarily responsible for introductory classes
- Have no guarantee of employment security
- Have access to support services
- Are compensated for advising/counseling students
- Are required to attend meetings
- Have good working relationships with the administration
- Are respected by full-time faculty
- Are paid fairly
- Have input in course designs
- Are included in faculty governance

6g. Besides this institution, at how many other institutions do you teach (e.g., 0, 1, 2, 3)? _____

6h. For the current term, how far in advance of the beginning of the term did you receive your course assignments?

- Less than 1 week
 - 1-2 weeks
 - 3-4 weeks
 - 1-3 months
 - More than 3 months
-

7. What is your principal activity in your current position at this institution? (Mark one)

- Administration
- Teaching
- Research
- Services to clients and patients
- Other

8. Personally, how important to you is:

(Responses: Essential, Very Important, Somewhat Important, Not Important)

- Research
- Teaching
- Service

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

If response to question 9 is greater than or equal to one, the respondent sees 9a and 9b

9a. How many of the courses that you are teaching this term are:

- General education courses
- Courses required for an undergraduate major
- Other undergraduate credit courses
- Developmental/remedial courses (not for credit)
- Non-credit courses (other than above)
- Graduate courses

9b. How many of these courses that you are teaching this term are being taught:

- At this institution
- At another institution

If response to question 9 is zero or missing, the respondent sees 9c

9c. What types of courses do you primarily teach? (Mark one)

- Undergraduate credit courses
- Graduate courses
- Non-credit courses
- I do not teach

10. In the past two years, have you taught a graduate course?

Yes No

GRADUATE FACULTY

These questions will only be included for respondents indicating they have taught a graduate course in Question 10.

10a. In the past two years, to what extent have you:

(Responses: To a Great Extent, To Some Extent, Not at All)

- Met with graduate students to discuss their research interests
- Written research grants
- Mentored graduate students
- Helped graduate students access professional networks
- Presented with graduate students at conferences
- Published with graduate students
- Included graduate students in research grant writing

10b. In the past two years, how many times have you:

- Written letters of recommendation for graduate students _____
- Chaired a master's thesis _____
- Chaired a dissertation _____

10c. Rate your agreement with the following statements:

(Responses: Agree Strongly, Agree Somewhat, Disagree Somewhat, Disagree Strongly)

- Graduate students in this program must compete for research opportunities
 - It is important for graduate students in this program to spend at least one term as a teaching assistant
 - This graduate program enrolls too many international students
 - Graduate faculty in my department prefer to hire international students to work on their research
 - International and domestic graduate students work well together in this program
 - I have encountered instances of academic dishonesty among graduate students
 - Graduate students in this program are trained to conduct research responsibly and ethically
 - Graduate students in this program receive adequate instruction on becoming good teachers
 - Graduate faculty in my department are good teachers
 - Graduate faculty in my department are good mentors
 - Most graduate students in this program move on to faculty positions
 - Most graduate students in this program move into positions within industry
-

11. Do you teach remedial/developmental skills in any of the following areas? (Mark all that apply)

- Reading
- Writing
- Mathematics
- General academic skills
- Other subject areas

12. During the past two years, have you engaged in any of the following activities? (Mark one for each item)

(Responses: Yes, No)

Advised student groups involved in service/volunteer work

Collaborated with the local community in research/teaching

Conducted research or writing focused on:

International/global issues

Racial or ethnic minorities

Women and gender issues

Lesbian, Gay, Bisexual, Transgender, Queer (LGBTQ) issues

Engaged undergraduates on your research project

Worked with undergraduates on a research project

Engaged in academic research that spans multiple disciplines

Supervised an undergraduate thesis

Engaged in public discourse about your research or field of study (e.g., blog, media interviews, op-eds)

Received funding for your work from:

Foundations

State or federal government

Business or industry

13. During the past two years, have you engaged in any of the following activities? (Mark one for each item)

(Responses: Yes, No)

Taught an honors course

Taught an interdisciplinary course

Taught an area studies course (e.g., women's studies, ethnic studies, LGBTQ studies)

Taught a service learning course

Taught an exclusively web-based course at this institution

Participated in organized activities around enhancing pedagogy and student learning

Taught a seminar for first-year students

Taught a capstone course

Taught in a learning community (e.g., FIG, linked courses)

Taught a course that meets general education requirements

14. In the past two years, to what extent have you:

(Responses: To a Great Extent, To Some Extent, Not at All)

Presented with undergraduate students at conferences

Published with undergraduates

15. During the past two years have you taken advantage of any of the following professional development opportunities at this institution?

(Responses for each item in each column: Yes, No, Not Eligible, Not Available)

Paid workshops outside the institution focused on teaching

Paid sabbatical leave

Travel funds paid by the institution

Internal grants for research

Training for administrative leadership

Incentives to develop new courses

Incentives to integrate new technology into your classroom

16. How many of the following have you published?

(Responses: None, 1-2, 3-4, 5-10, 11-20, 21-50, 51+)

Articles in academic or professional journals

Chapters in edited volumes

Books, manuals, or monographs

Other, such as patents, or computer software products

17. In the past two years, how many exhibitions or performances in the fine or applied arts have you presented?
(Responses: None, 1-2, 3-4, 5-10, 11-20, 21+)
18. In the past two years, how many of your professional writings have been published or accepted for publication?
(Responses: None, 1-2, 3-4, 5-10, 11-20, 21+)
19. During the present term, how many hours per week on average do you actually spend on each of the following activities?
(Responses: None, 1-4, 5-8, 9-12, 13-16, 17-20, 21+)
- Scheduled teaching (give actual, not credit hours)
 - Preparing for teaching (including reading student papers and grading)
 - Advising and counseling of students
 - Committee work and meetings
 - Other administration
 - Research and scholarly writing
 - Other creative products/performances
 - Community or public service
 - Outside consulting/freelance work
 - Household/childcare duties
 - Other employment, outside of academia
20. In your interactions with undergraduates, how often in the past year did you encourage them to engage in the following activities? If you encouraged them to engage in an activity frequently, mark F. If you encouraged them to engage in an activity one or more times, but not frequently, mark O (Occasionally). Mark N (Not at All) if you have not encouraged students to engage in the activity at all.
(Responses: Frequently, Occasionally, Not at All)
- Ask questions in class
 - Support their opinions with a logical argument
 - Seek solutions to problems and explain them to others
 - Revise their papers to improve their writing
 - Evaluate the quality or reliability of information they receive
 - Take risks for potential gains
 - Seek alternative solutions to a problem
 - Look up scientific research articles and resources
 - Explore topics on their own, even though it was not required for a class
 - Accept mistakes as part of the learning process
 - Seek feedback on their academic work
 - Work with other students on group projects
 - Integrate skills and knowledge from different sources and experiences
21. How often in the past year have you encouraged students to:
(Responses: Frequently, Occasionally, Not at All)
- Use different points of view to make an argument
 - Make connections between ideas from different courses
 - Critically evaluate their position on an issue
 - Recognize the biases that affect their thinking
 - Think more broadly about an issue

22. How frequently in the courses you taught in the past year have you given at least one assignment that required students to:

- (Responses: Frequently, Occasionally, Not at All)*
- Engage deeply with a significant challenge or question within your discipline
 - Write in the specific style or format of your discipline
 - Use research methods from your discipline in field or applied settings
 - Apply learning from both academic and field settings
 - Describe how different perspectives would affect the interpretation of a question or issue in your discipline
 - Weigh the meaning and significance of evidence
 - Discuss the ethical or moral implications of a course of action
 - Work with classmates outside of class
 - Lead a discussion, activity or lab
 - Provide and/or receive feedback to classmates about a draft or work still in progress
 - Analyze and interpret data
 - Apply mathematical concepts and computational thinking

23. In how many of the courses that you teach do you use each of the following?

(Responses: All, Most, Some, None)

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

24. In how many of the courses that you teach do you use each of the following?

(Responses: All, Most, Some, None)

- “Learn before lecture” through multimedia tools (e.g., flipping the classroom)
- Readings on racial and ethnic issues
- Readings on women and gender issues
- Starting class with a question that engages students
- Techniques to create an inclusive classroom environment for diverse students
- Supplemental instruction that is outside of class and office hours
- Student presentations
- Student evaluations of each others’ work
- Grading on a curve
- Rubric-based assessment

25. In creating assignments for your courses, how often do you:

(Responses: Frequently, Occasionally, Not at All)

- Provide instructions clearly delineating what students are to do to complete the assignment
- Explain what you want students to gain from the assignment
- Provide feedback on drafts or work still in progress
- Provide in advance the criteria for evaluating the assignment
- Explicitly link the assignment with course goals or learning objectives

26. How frequently do you incorporate the following forms of technology into your courses?

(Responses: Frequently, Occasionally, Not at All)

YouTube or other videos

Classroom enhancement technology (e.g., Elmo, tablet PCs)

Simulations/animations

Podcasts

Online homework or virtual labs

Online discussion boards

27. Indicate the importance to you of each of the following education goals for undergraduate students:

(Responses: Essential, Very Important, Somewhat Important, Not Important)

Develop ability to think critically

Prepare students for employment after college

Prepare students for graduate or advanced education

Develop moral character

Provide for students' emotional development

Teach students the classic works of Western civilization

Help students develop personal values

Instill in students a commitment to community service

Enhance students' knowledge of and appreciation for other racial/ethnic groups

Promote ability to write effectively

Help students to evaluate the quality or reliability of information they receive

Teach students tolerance and respect for different beliefs

Encourage students to become agents of social change

28. Please indicate your agreement with each of the following statements:

(Responses: Agree Strongly, Agree Somewhat, Disagree Somewhat, Disagree Strongly)

The chief benefit of a college education is that it increases one's earning power

A racially/ethnically diverse student body enhances the educational experience of all students

External pressures often prevent researchers from being completely objective in the conduct of their work

Colleges have a responsibility to work with their surrounding communities to address local issues

Private funding sources often prevent researchers from being completely objective in the conduct of their work

29. Indicate the extent to which you agree or disagree with each of the following:

(Responses: Agree Strongly, Agree Somewhat, Disagree Somewhat, Disagree Strongly)

It is primarily up to individual students whether they succeed in my courses

I try to dispel perceptions of competition

I encourage all students to approach me for help

Most students are well-prepared for the difficulty of the courses I teach

In my classroom, there is no such thing as a question that is too elementary

All students have the potential to excel in my courses

The amount of material that is required for my courses poses a substantial challenge to students

Students are often overwhelmed by the pace of my courses

Most students learn best when they do their assignments on their own

30. Below are some statements about your college or university. Indicate the extent to which you agree or disagree with each of the following:

(Responses: Agree Strongly, Agree Somewhat, Disagree Somewhat, Disagree Strongly)

- Faculty are interested in students' personal problems
- Racial and ethnic diversity is reflected in the curriculum
- Most students are well-prepared academically
- This institution has effective hiring practices and policies that increase faculty diversity
- Student Affairs staff have the support and respect of faculty
- Faculty are committed to the welfare of this institution
- Faculty here are strongly interested in the academic problems of undergraduates
- There is a lot of campus racial conflict here
- My research is valued by faculty in my department
- My teaching is valued by faculty in my department
- My service is valued by faculty in my department
- Faculty are sufficiently involved in campus decision making
- This institution takes responsibility for educating underprepared students
- The criteria for advancement and promotion decisions are clear
- Most of the students I teach lack the basic skills for college level work
- There is adequate support for faculty development
- This institution successfully educates students in remedial/developmental education
- Faculty are not prepared to deal with conflict over diversity issues in the classroom

31. Indicate how important you believe each priority listed below is at your college or university:

(Responses: Highest Priority, High Priority, Medium Priority, Low Priority)

- Promote the intellectual development of students
- Develop a sense of community among students and faculty
- Facilitate student involvement in community service
- Help students learn how to bring about change in society
- Increase or maintain institutional prestige
- Hire faculty "stars"
- Recruit more minority students
- Enhance the institution's national image
- Promote gender diversity in the faculty and administration
- Promote racial and ethnic diversity in the faculty and administration
- Provide resources for faculty to engage in community-based teaching or research
- Create and sustain partnerships with surrounding communities
- Pursue extramural funding
- Strengthen links with the for-profit, corporate sector
- Develop leadership ability among students
- Develop an appreciation for multiculturalism
- Prepare students for the workplace

32. Indicate how well each of the following describes your college or university: (Mark one for each item)

(Responses: Very Descriptive, Somewhat Descriptive, Not Descriptive)

- It is easy for students to see faculty outside of regular office hours
- The faculty are typically at odds with campus administration
- Faculty here respect each other
- Faculty are rewarded for being good teachers
- There is respect for the expression of diverse values and beliefs
- Faculty are rewarded for their efforts to use instructional technology
- Administrators consider faculty concerns when making policy
- The administration is open about its policies

33. Please indicate the extent to which you:

(Responses: *To a Great Extent, To Some Extent, Not at All*)

- Feel that the training you received in graduate school prepared you well for your role as a faculty member
- Achieve a healthy balance between your personal life and your professional life
- Experience close alignment between your work and your personal values
- Feel that you have to work harder than your colleagues to be perceived as a legitimate scholar
- Mentor new faculty
- Mentor undergraduate students
- Structure your courses so that students master a conceptual understanding of course content
- Structure your courses so that students develop study skills that prepare them for college-level work

34. How satisfied are you with the following aspects of your job? (Mark one for each item)

(Responses: *Very Satisfied, Satisfied, Marginally Satisfied, Not Satisfied, Not Applicable*)

- Salary
- Health benefits
- Retirement benefits
- Opportunity for scholarly pursuits
- Teaching load
- Quality of students
- Office/lab space
- Autonomy and independence
- Professional relationships with other faculty
- Competency of colleagues
- Job security
- Departmental leadership
- Course assignments
- Freedom to determine course content
- Availability of child care at this institution
- Prospects for career advancement
- Clerical/administrative support
- Overall job satisfaction
- Relative equity of salary and job benefits
- Flexibility in relation to family matters or emergencies

35. Please indicate the extent to which each of the following has been a source of stress for you during the past two years:
 (Mark one for each item)

(Responses: Extensive, Somewhat, Not at All, Not Applicable)

- Managing household responsibilities
- Child care
- My physical health
- Review/promotion process
- Subtle discrimination (e.g., prejudice, racism, sexism, homophobia, transphobia)
- Personal finances
- Committee work
- Faculty meetings
- Colleagues
- Students
- Research or publishing demands
- Institutional procedures and “red tape”
- Teaching load
- Lack of personal time
- Job security
- Working with underprepared students
- Self-imposed high expectations
- Increased work responsibilities
- Institutional budget cuts

36. During the past two years, have you:

(Responses: Yes, No)

- Considered leaving academe for another job
- Considered leaving this institution for another
- Engaged in public service/professional consulting without pay
- Received at least one firm job offer elsewhere
- Sought an early promotion

37. For each of the following items, please mark either Yes or No.

(Responses: Yes, No)

- Are you a member of a faculty union?
- Are you a U.S. citizen?
- Do you plan to retire within the next three years?
- Do you use your scholarship to address local community needs?
- Have you been sexually harassed at this institution?
- Have you ever interrupted your professional career for more than one year for family reasons?
- Have you ever received an award for outstanding teaching?

38. How would you characterize your political views? (Mark one)

- Far Left
- Liberal
- Middle of the Road
- Conservative
- Far Right

39. If you were to begin your career again, would you:

(Responses: Definitely Yes, Probably Yes, Not Sure, Probably No, Definitely No)

- Still want to come to this institution?
- Still want to be a college professor?

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

41. Your base institutional salary reported above is based on (Mark one):

- Less than 9 months
- 9/10 months
- 11/12 months

PART-TIME FACULTY

These questions will replace questions 40 and 41 for faculty who indicate they are part-time.

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

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

42. What percentage of your current year's income comes from:
 (e.g., for 45%, please enter 45 - total for all responses must equal 100%)

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

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

- | | |
|---|-------|
| Major of highest degree held | _____ |
| Department of current faculty appointment | _____ |

44. On the following list, please mark one in each column:

- | | |
|--|--|
| Highest Degree Earned | |
| Degree Currently Working On | |
| Bachelor's (B.A., B.S., etc.) | |
| Master's (M.A., M.S.) | |
| M.F.A. | |
| M.B.A. | |
| LL.B., J.D. | |
| M.D., D.D.S. (or equivalent) | |
| Other first professional degree beyond B.A. (D.D., D.V.M., etc.) | |
| Ed.D. | |
| Ph.D. | |
| Other degree | |
| None | |

45. Are you currently serving in an administrative position as: (Mark all that apply)

- Department chair
- Dean (including Associate or Assistant)
- President
- Vice-President
- Provost
- Other
- Not Applicable

46. Are you: (Mark all that apply)

- White/Caucasian
- African American/Black
- American Indian/Alaska Native
- Asian American/Asian
- Native Hawaiian/Pacific Islander
- Mexican American/Chicano
- Puerto Rican
- Other Latino
- Other

47. Is English your native language?

- Yes
- No

48. Are you currently: (Mark one)

- Single
- In a civil union
- In a domestic partnership
- Married
- Unmarried, living with partner
- Separated
- Divorced
- Widowed

49. How many children do you have in the following age ranges?

(Responses: 0, 1, 2, 3, 4+)

- Under 18 years old
- 18 years or older

50. Please enter the four-digit year of your birth (e.g., 1944, 1988). _____

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

- Yes
- No

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

52. to 81. Local Optional Questions (30 total)

(Responses: A, B, C, D, E)

82. to 86. Local Optional Open Ended Questions (5 total)

APPENDIX A

General Area (Major / Department)

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

Specific Discipline (Major / Department)

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

1101=Biomedical/medical engineering	2301=Culinary arts and related services
1102=Chemical engineering	2302=Personal and culinary services
1103=Civil engineering	2303=Personal and culinary services, other
1104=Computer engineering	2401=Philosophy
1105=Electrical/electronics/comms engineering	2402=Religion/religious studies
1106=Engineering technologies/technicians	2403=Theology and religious vocations
1107=Environmental/environmental health eng	2404=Philosophy, religion & theology, other
1108=Mechanical engineering	2501=Astronomy & astrophysics
1109=Engineering, other	2502=Atmospheric sciences and meteorology
1201=English language and literature/letters	2503=Chemistry
1301=Family/consumer sciences, human sciences	2504=Geological & earth sciences/geosciences
1401=Foreign languages/literature/linguistics	2505=Physics
1501=Alternative/complementary medicine/sys	2506=Physical sciences, other
1502=Chiropractic	2601=Behavioral psychology
1503=Clinical/medical lab science/allied	2602=Clinical psychology
1504=Dental support services/allied	2603=Education/school psychology
1505=Dentistry	2604=Psychology, other
1506=Health & medical administrative services	2701=Public administration
1507>Allied health and medical assisting services	2702=Social work
1508=Allied health diagnostic, intervention, treatment professions	2703=Public administration & social svcs other
1509=Medicine, including psychiatry	2801=Science technologies/technicians
1510=Mental/social health services and allied	2901=Corrections
1511=Nursing	2902=Criminal justice
1512=Optometry	2903=Fire protection
1513=Osteopathic medicine/osteopathy	2904=Police science
1514=Pharmacy/pharmaceutical sciences/admin	2905=Security and protective services, other
1515=Podiatric medicine/podiatry	3001=Anthropology (except psychology)
1516=Public health	3002=Archeology
1517=Rehabilitation & therapeutic professions	3003=Criminology
1518=Veterinary medicine	3004=Demography & population studies
1519=Health/related clinical services, other	3005=Economics
1601=Law	3006=Geography & cartography
1602=Legal support services	3007=History
1603=Legal professions and studies, other	3008=International relations & affairs
1701=Library science	3009=Political science and government
1801=Mathematics	3010=Sociology
1802=Statistics	3011=Urban studies/affairs
1803=Mathematics and statistics, other	3012=Social sciences, other
1901=Mechanical/repair technologies/techs	3101=Transportation and materials moving
2001=Multi/interdisciplinary studies	3201=Other
2101=Parks, recreation and leisure studies	
2102=Health and physical education/fitness	
2103=Parks/recreation/leisure/fitness studies, other	
2201=Precision production	