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Determinants of a Professor's Decision to Include Service-Learning in an Academic Course

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DETERMINANTS OF A PROFESSOR'S DECISION TO INCLUDE SERVICE-LEARNING IN AN ACADEMIC COURSE

BY

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Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy
Seton Hall University
2010
APPROVAL FOR SUCCESSFUL DEFENSE

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Abstract

More faculty report each year that they are incorporating service-learning in their academic courses, which is often related to attempts by colleges and universities to link academics with service to the community as part of their mission, or by the academic disciplines that see service-learning as a way to link theory and practice. Critical to the expansion of service-learning is the recognition that it is the individual professor who ultimately decides whether or not to include a service-learning experience in the curriculum. The main purpose of this study is to determine the likelihood that faculty will use service-learning within their courses based on sociodemographic, academic and institutional characteristics, faculty workload issues, and the relationship between faculty and their institutions. By building upon the previous research studies, both on faculty in general and on faculty and service-learning, this study is a step toward a more comprehensive profile of faculty who have selected service-learning as a pedagogical option and faculty who have not.

Determinants relating to workload, work preference, personal beliefs, and institutional cultural factors were found to be more significantly associated with faculty who did and did not use service-learning than the sociodemographic, academic and institutional characteristics. In fact, the three most significant and positive relationships were faculty who believed that many courses at their institutions involved community service, faculty who used other student-centered pedagogies, and faculty who participated in community or public service each week.
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CHAPTER I: INTRODUCTION

More professors each year report that they are using service-learning in the courses they teach (Campus Compact, 2007a; Lindholm, Astin, Sax, & Korn, 2002; 2005). This increase is often related to the encouragement of the institutions of higher education that are attempting to link academics with service to the community as part of their mission, or by the academic disciplines that see service-learning as a way to link theory and practice. Critical to the expansion of service-learning is the recognition that it is the individual professor who ultimately decides whether or not to include a service-learning experience in their academic courses. The decision to use service-learning must be weighed within the context of the faculty workload and reward systems, which continues to increase the emphasis on research over teaching. In general, how service and learning are combined continues to be made at both the macro level of an institutional commitment to serve society and the micro level with the faculty deciding how to engage their students in learning.

It has become vital that higher education administrators, faculty leaders and individual faculty members gain a better understanding of why some professors opt to use service-learning as a teaching and learning tool and others do not, regardless of whether there is an institutional commitment to this form of experiential education.

Purpose of the Study

Service-learning is considered one of the newer approaches to linking academic study and community service, known as experiential education (Chadwick & Pawlowski, 2007). It is only within the last two decades that service-learning has been adopted by more professors in a wider variety of disciplines, has gained the attention of scholars, and has been formally considered a viable student-centered pedagogical option. More professors each year report that
they are using service-learning in the courses they teach, as the average number of service-
learning courses reported being taught each year continues to rise (Campus Compact, 2007a;
Lindholm, et al., 2002; Lindholm, et al., 2005). “Many national academic associations in higher
education … have developed service-learning initiatives. Dozens of academic disciplinary
associations have launched programs and publications designed to help faculty implement
service-learning in their courses. Even the federal government, by way of the Corporation for
National and Community Service, awards millions of dollars in grants annually to institutions of
higher learning to fund various service-learning initiatives” (DiPadova-Stocks, 2005, pp. 346-
347).

While there is widespread acknowledgement that service-learning use is increasing, little
is understood as to what factors relating to faculty can be associated with the use of this
instructional method. Quite beyond the patterned variation among institutions and among
academic fields in the use of service-learning, there is the even larger variation within
institutions and academic fields. Clearly, strong personal factors shape faculty commitments to
service-learning. Leaders in higher education and society who seek to forge a closer connection
between higher learning and community service need to gain a better understanding as to why
some professors opt to use this teaching and learning tool and others do not.

The purpose of this dissertation research is to identify key factors associated with the
faculty use of service-learning in academic credit-bearing courses at four-year institutions of
higher education. It looks at how sociodemographic and academic characteristics, workload
issues, and institutional influences can be linked to service-learning activities.

The significance of this study is twofold. First, the results provide a deeper
understanding as to why some faculty are more inclined to include service-learning in their
Second, the use of two national datasets acquired for this study is significant in that it is the first time that they have been simultaneously used to analyze faculty issues.

With knowledge gained through this study, academic leaders can start to identify ways to increase service-learning efforts, if that is a goal of the institution or academic discipline, or have better insight into why such efforts are not being embraced as readily by certain groups of faculty. This study may also be able to provide answers regarding how to clarify perceived ambiguities in the faculty role and workload issues, using service-learning as a basis for this analysis.

Overview of This Study

The main goal of this study is to identify which key determinants were found to be significantly associated with certain groups of faculty who included, or did not include, service-learning in their academic courses. From this information, institutions and faculty leaders could develop ways to target certain types of faculty to encourage them to use service-learning, as well as provide rewards and recognition for such endeavors or work toward changing the institutional culture to be more open to this student-centered pedagogy.

The primary research questions that guided the analyses in this study included:

1. What is the percentage of faculty at four-year institutions of higher education who include and do not include a service-learning component in their academic credit-bearing courses?
2. How do sociodemographic and academic characteristics, workload issues, and institutional factors, as perceived by faculty, predict the likelihood that faculty will use service-learning?

The research questions frame three hypotheses. The first hypothesis is that the faculty’s use of service-learning in academic courses relates to sociodemographic, academic and institutional characteristics. The second hypothesis is that the inclusion of service-learning in a course can be related to the faculty’s focus on teaching, research and service. The third hypothesis is that
faculty with a more “local” commitment to their institution and its internal academic community are more likely to incorporate service-learning into their courses than those who have a “cosmopolitan” focus, with their community of peers being formed externally and through their academic discipline (Gouldner, 1958).

The conceptual framework for this study combines the work of Blackburn and Lawrence (1995), as outlined in their book Faculty at Work: Motivation, Expectation, Satisfaction, and the research of Antonio, Astin and Cress (2000), as found in their article “Community Service in Higher Education: A Look at the Nation’s Faculty.” The first model focuses on the properties of the individual, and the latter addresses faculty attitudes and behaviors as they relate to community service when controlling for several sociodemographic, academic and institutional characteristics.

Two national datasets that have been obtained for this dissertation are the 2003 Faculty Survey of Student Engagement (FSSE) from the Center for Postsecondary Research at Indiana University Bloomington and the 2001 HERI Faculty Survey from the Higher Education Research Institute (HERI) at University of California, Los Angeles.

The value of the HERI dataset is that it provides the broader perspective on the faculty’s use of service-learning in relation to the predictive variables. The value of the FSSE dataset is that the respondents have selected one course of importance to focus on when answering the survey, which gives stronger insight into faculty beliefs, values, and pedagogical preferences when responding to the survey. The perspectives provided through these two datasets serve as a basis for analyzing the similarities and differences in results when they are used to answer each research question. It is expected that some research and subsidiary questions are best answered by either the FSSE data or the HERI data. When both datasets can answer the same question, the
results are matched and compared with differences being explained with the support of the literature review. The two datasets are not merged together.

Based on the proposed conceptual model, the data from the datasets were first analyzed using cross-tabulations to identify patterns and trends among and within independent variables to determine which may be the best options to use in a logistic regression model where the dependent variables are categorical (Foster, Barkus, & Yavorsky, 2006; Nolan & Heinzen, 2008). A logistic regression model is used to determine the odds that faculty are incorporating service-learning into their courses.

**Organization of the Dissertation**

Beyond this introduction, this dissertation consists of four more chapters. Chapter II presents a comprehensive literature review that first defines service-learning and traces its development over time. It then focuses on the faculty and what is important to them, followed by a review of faculty and their use of service-learning, and how the institutions where they work can be associated with its incorporation into the curriculum and institutional culture. Chapter III presents the research design, including the research questions and hypotheses, conceptual framework, data sources and samples, research variables, methods of analysis/statistical model, and limitations. Chapter IV consists of the findings from the data analysis of each of the datasets, a summary of key findings, and a comparison of the datasets. Chapter V presents the conclusions, implications for policy and practice, and recommendations for future research.
CHAPTER II: LITERATURE REVIEW

If we are concerned over the role of higher education in shaping a more engaged citizenry, we must also examine the role of faculty in shaping the curricular experiences students will have, and in creating an institutional culture, that values connections between communities and campus (Astin et al., 2006, p. 94).

What is Service-Learning?

Service-learning is a form of student-centered experiential education pedagogy that links theory with practice, as well as academic study and service, to enable students to apply the knowledge gained in the classroom to real life situations and then to reflect back on the experience, impact and learning. It is part of an effort to instill in students a sense of civic responsibility and a method for teaching them to apply knowledge gained in the classroom to better serve and advance society.

For an activity to be classified as service-learning, it must be incorporated into an academic curriculum under the direction of the professor and include both the reflection and reciprocity components. Reciprocity can be found in the relationship between and impact on the students, faculty and community members involved in the service-learning experience (Pompa, 2005). It is important to recognize that service-learning is not as widely understood as a form of experiential education as the internship or co-operative learning experience because of the lack of a common definition; it is a relatively newer pedagogy in mainstream academia; and it is interdisciplinary in nature with a presence in all academic disciplines (DiPadova-Stocks, 2005). Faculty may also be incorporating service-learning into the classroom without labeling it as such.

What follows are a few versions of how service-learning is defined.

In simplest terms, service-learning is “a teaching/learning method that connects meaningful community service experiences with academic learning, personal growth, and civic
responsibility” (Points of Light Foundation, 2004). A more detailed definition recognizes that it is “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 civic responsibility. This is in contrast to co-curricular and extracurricular service, from which learning may occur, but for which there is no formal evaluation and documentation of academic learning” (Bringle & Hatcher, 1995, p. 112).

These two definitions emphasize the academic element that differentiates service-learning from other forms of experiential education and community service in that they put the emphasis on the curriculum and student learning. The first cites the teaching and learning element, and the second notes that this form of pedagogy is situated in an academic course. From these two definitions, it should stand to reason that the professor is the primary decision maker in the service-learning process, something that is not present in the following definition.

Probably the most common definition of service-learning is that it is “a form of experiential education in which students engage in activities that address human and community needs together with structured opportunities intentionally designed to promote student learning and development” (Jacoby, 1996, p. 5). These structured opportunities are both the linking of theory to practice within the academic curriculum and the reflection element needed to help students better process the experience. The structured opportunities involve students’ performing the service in and for the community, either during or outside the classroom time with the guidance of the community agency contact or the clients being served. When this happens, it still needs to be brought back into the classroom for reflection and application to the coursework. Jacoby’s definition is often cited because of its emphasis on civic and social
responsibility, as well as the campus-community partnership theme, which may result in service-learning being viewed both from the student's perspective and at an institutional level. What is missing from this definition is the faculty member's role in the service-learning experience.

When looking at the value of service-learning, DiPadova-Stocks (2005) wrote "Service-learning, properly conducted, enables students and faculty alike to not only see and understand their fellow citizens, but also to learn from them" (p. 351). The author acknowledges the value of reciprocity between faculty, students and the community in the learning environment. Not only do students learn from their professors, but both students and professors can also learn from the recipients of their service-learning activities. It is here that the author brings the faculty member into the discussion on the values of service-learning, even though it is from a learning perspective rather than the professor's contribution of teaching and service.

Service-learning is not a form of passive learning, where a student sits and listens to a lecture or a self-contained teaching method that does not connect with the outside world. Rather, it requires the active participation of not only the students and faculty, but also the community-based organizations and the institutions of higher education all in partnership to develop and implement a mutually beneficial and reciprocal learning and serving experience (Clark, 1999; Dicklitch, 2005; Kenworthy-U'Ren, 2008), often with more academic rigor than traditional pedagogies (DiPadova-Stocks, 2005; Godfrey, Illes, & Berry, 2005). Service-learning has implications beyond the classroom, since it brings the real world to the students and vice versa. "This powerful instructional tool enables each of us to learn from those who are different, and in doing so, to make a difference in our communities and in our world" (DiPadova-Stocks, 2005, p. 352). It provides the opportunities for reflection and for the formation of a reciprocal relationship between the institution and the community, as well as between the students and
individuals served. This concept was promoted by John Dewey (1938) when he wrote that experience is central to student learning and pedagogy.

Service-learning is also considered “a philosophy of education that integrates service into the community with more traditional classroom pedagogy” (Peacock, Bradley, & Shenk, 2001, p. 24). Students learn with real case studies that are current and relevant by bringing the outside world into the classroom to place the course content in the context of larger intellectual concerns that have an element of ethical and analytical inquiry. Service-learning is also linked to civic responsibility, with the intent of encouraging students to apply the knowledge gained to serving the community (Singer, King, Green, & Barr, 2002). Cantor (1995) believed that “perhaps service-learning’s greatest contribution is its unique ability to meet the needs of American society for responsible civic learning” (p. 60). The International Partnership for Service Learning notes that “service-learning responds to the students’ desire to be in the world, learning from experience as well as classes, and to put their education to use for the good of others” (Campus Compact, 2005). This definition, along with several others previously mentioned, focuses on the students, one of the three key stakeholders in any service-learning experience. It highlights that service-learning is a student-centered pedagogy that some have chosen to use.

Service-learning is not just about student engagement. It is also a teaching method used by faculty to encourage active and engaged learning that enables students to apply their classroom knowledge to the real-world situations (Caboni, Mundy, & Duesterhaus, 2002; Ramaley, 2007; Rothman, Anderson, & Schaffer, 1998), and links the faculty’s pedagogical work with their scholarly activities (Furco, 2001) that Boyer (1990) promoted in Scholarship Reconsidered. Birge (2005) was not surprised to find that service-learning had increased in higher education when he wrote:
Many higher education organizations, disciplinary associations, and federal agencies are providing a second decade of training, technical assistance, and funding to support the practice of service-learning. Research articles and books about service-learning are adding to an expanding culture of evidence that service-learning is a valid and reliable teaching method and form of scholarship. Given this recent increase in the examination of service-learning practice; however, it is surprising to see that we have not focused more clearly upon the motivations of faculty who are service-learning practitioners. What is it about service-learning that draws some faculty to be practitioners, but not others? Is there a difference in the practice of service-learning between faculty who invoke its use simply because it is an effective teaching tool? (p. 196).

From a faculty perspective, service-learning is often viewed as a teaching function first, although some have found ways to shift some of the focus of service-learning to count toward the research expectations within the faculty reward system. This shift is partially associated with the need for faculty to increase their service responsibilities to the institution and the community, while still maintaining an active research agenda and teaching to a more diverse student population with different learning styles (Clark, 1999). As a result, the purpose of service-learning has expanded to appear in all areas of the faculty tripartite of teaching, research and service without much understanding of the basis for this occurrence.

Two other service-learning definitions that are related to the ones mentioned above were included in an article that Speck (2001) wrote for the New Directions for Higher Education journal. The first is that service-learning unites research, teaching and service, which recognizes the need for professors to address the relationship between these faculty activities (Cushman, 1999). The second is that "service-learning is a pedagogy that fosters the development of skills and knowledge needed for participation in public life" (Forman & Wilkinson, 1997, p. 278). Here, Forman and Wilkinson identify service-learning as a pedagogy, thus legitimizing its use as a teaching and learning tool that professors may consider incorporating into their curricula.

Many faculty who are focused on student-centered pedagogy are more inclined to support the notion that "service-learning provides a unique opportunity for students to grow both
professionally and personally” (Lester, Tomkovick, Wells, Flunker, & Kickul, 2005, p. 278). Zlotkowski (1998) developed a service-learning conceptual matrix to demonstrate how successful service-learning programs require a balance between pedagogical strategies, values being developed, a supportive academic culture, and direct work with community partners.

The Academy Partners Service-Learning Fellows Program, which is part of Academy of Management (AoM), notes that the decision on student learning objectives and outcomes, and whether or not to use service-learning, is made at the department or college level (DiPadova-Stocks, 2005). The professor’s role is implied, or downplayed, as secondary to the curricular decisions collectively made by groups of faculty and academic leaders. Even though these decisions are made by groups of professors, usually with the guidance of academic professional associations and accrediting bodies, they do not recognize that the acceptance and implementation of the curricular guidelines is in the hands of the professors who teach the courses, and therefore make pedagogical choices such as the use of lectures, class discussions, research papers, or group projects.

The source of the service-learning initiative can come through many channels, whether it is when the Office of Service-Learning staff approach a professor with an idea, a group of students ask the professor to supervise a service project, or want to know the theories being discussed in class. The idea may also stem from a professor and a community agency representative talking about how they might work together or involve students in a community activity. Faculty within a given academic discipline may encourage their peers to try service-learning by promoting it as a valuable and innovative teaching method at national conferences or by telling others that their academic discipline provides resources to encourage them to participate. Certain academic disciplines may have more of a focus on applied research and
student-centered pedagogies than others may, which may contribute to service-learning’s being more commonly accepted and used.

Morton (1996) noted that service-learning can take on many forms in the classroom. Some have more of a reflective comparison basis, with service at the center of the learning process. Other models focus on applying the content to real-world experiences that may include problem-based learning pedagogy and may be more disciplinary in nature. Problem-based learning is often implemented in the form of an action research project, which enables faculty and students to integrate teaching and learning, research and service. Action research enables students to gain applied research skills by analyzing data pertaining to social issues, and supporting their professors’ research activities (Bass & Silverstein, 1996). The benefit to the faculty is that they are able to capitalize on their students’ data collection and basic analysis to enhance or supplement their own research agenda, something they often do as part of their research efforts, while building a link between their teaching, research and service obligations.

Overall, service-learning has developed into a teaching, learning and service tool that engages and responds to different academic stakeholders in a variety of ways. “The true litmus test for successful service-learning is if we have been able to fully integrate the community service into the course, involve our community partners in the planning and teaching, and provide countless opportunities for students to reflect on their learning and service” (Dicklitch, 2005, p. 135), as well as make it worthwhile for faculty in the reward structure. Even with its various definitions and interdisciplinary nature, service-learning’s level of importance in academia continues to grow.
The Historical Roots of Service-Learning

Since the beginning of American higher education, colleges and universities have both pursued advanced knowledge and served the community, which is often reflected in their mission statements. This level of service ranges from preparing students for leadership roles in their communities to universities contributing to the advancement of society. Modern colleges and universities have continued the tradition of recognizing its historic public purpose in many ways. The research universities generally focus more on knowledge creation and production to advance society with an emphasis on research. The liberal arts colleges aim to prepare their predominantly undergraduate student body for leadership, and emphasize teaching as a primary function of faculty workloads. The metropolitan universities serve the diverse needs of their communities through teaching, research and service activities ("About CUMU," 2010). While each type of institution includes all the elements of teaching, research and service, they differentiate themselves through their institutional culture and organizational structures that tend to generally emphasize one area more than the others do. This variation helped to differentiate the various types of colleges and universities (Stanton, Giles, & Cruz, 1999). More recently, this differentiation has become less clear as more four-year colleges increase their expectations for research-productive faculty, coupled with the faculty trained to do publishable research during graduate school at the major research universities.

There is a long tradition in American higher education that continues to respond to the needs and changes in society (Birge, 2005; Rothman, et al., 1998; Sandman, Holland, & Bruns, 2007) through academic programs (Thomas, 2002). Goldstein (1990) wrote, "The tradition of service-learning is a venerable one, with roots in both the American concept of community service and the ancient apprenticeship system, which understood that one became accomplished
in the arts or skilled in the crafts only by engaging in them with guidance from the masters” (p. 39). Today, colleges and universities are increasingly focusing their attention and resources on enhancing and promoting student learning (Hinck & Brandell, 2000), as well as on the development of student civic engagement and campus-community partnerships that link learning and service (Birge, 2005). This is especially important as the student body becomes more diversified, not only from a sociodemographic perspective, but also in terms of academic preparedness and learning styles.

Throughout the evolution of American higher education, from the founding of Harvard University in 1623 to the modern university we know today, “colleges and universities have been, and remain, remarkably humane organizations” (Blackburn & Lawrence, 1995). This is an amazing feat, considering that the bureaucratization of the institution of higher education has resulted in a shift from purely teaching to one of rules, regulations and accountability that appears to divert the faculty’s time and focus away from this core element. It is also remarkable in light of the faculty shift toward discipline-specific specialization and the increased importance of research in faculty advancement. In some respect, the increased attention that faculty, students and institutions have given to service-learning over the past two decades may be partly due to an interest in countering this trend and visibly returning to higher education’s roots of connecting the institutions, its members, and the community. To better understand this evolution, it is important to identify key historical points that may have laid the groundwork for service-learning to become recognized as a viable pedagogical option for faculty to use in their academic courses.

After the Civil War, the American government passed the Morrill Act and created land grant institutions to make higher education more involved with, and accountable to, society, as
well as committed to public service (Birge, 2005; Miller, 1987). Around the beginning of the
nineteenth century and the start of the progressive era, American higher education renewed the
concept of service to the community, as demonstrated by the University of Wisconsin’s initiative
called the “Wisconsin Idea.” This endeavor, which was subsequently adopted by many
American higher education institutions, was led by the institution’s leadership to encourage
faculty to utilize their expertise to address public issues as a form of service to society and was
stated in the institution’s mission (Hoeveler, 1989; Lucas, 2006; Schnaubelt & Statham, 2007;
Wright, 2001). The progressive era was also a point in time when a major shift occurred in
higher education from an elite system to one that was more accessible to the general public.

According to Hinck and Brandell (2000), American higher education was changed again
in the 1950s with the Truman Commission’s reporting that “higher education should serve the
public at large” (pp. 869-870). This began a period when higher education saw enrollment
greatly expand, with the implementation of the G.I Bill, the creation of the community college,
the increase in federal support for faculty research, and the baby boomer generation starting to
enter college (Schuster & Finkelstein, 2006). These significant changes coincided with many
professors’ shifting their focus toward the academic disciplines, pushing for more research time
and a lighter teaching load, and the importance of the department as an academic center within
the institution (DiPadova-Stocks, 2005; Johnson, 2007; Schnaubelt & Statham, 2007). Ernest
Boyer noted that “the intense research focus had led higher education away from its mission to
prepare citizens capable of acting for the common good” (DiPadova-Stocks, 2005, p. 346).
While this may be true, there has been a growing cadre of faculty over the last two decades who
are finding ways to link their research with community efforts, or to address societal needs.
About 40 years later, academic leaders began to recognize that their institutions were drifting from their mission to serve the community to having a reputation of faculty working in an ivory tower that is disconnected from the outside world (Dicklitch, 2005). In the 1980’s, higher education leaders sought to address the decline in student civic involvement (Ostrander, 2004), and found ways of structuring service and reflection activities for their students despite the faculty resistance (Hollander, 2007). A small group of faculty pioneers attempted to counter this focus and started to experiment with service-learning types of initiatives, and national associations like Campus Compact were formed (Johnson, 2007; Stanton, et al., 1999).

The pioneers of service-learning laid the foundation for this instructional method to gain recognition in mainstream academia through their various efforts, starting in the mid-1960’s and continuing through 1985, the year that Campus Compact was founded (Stanton, et al., 1999) and to the turn of the century. Below are key points in the history of service-learning that took place in the second half of the twentieth century, from the time when service-learning was first documented to the first international academic conference devoted to this student-centered pedagogy.

In 1965-66, Bill Ramsay and Bob Sigmon first used the term “service-learning” to describe a TVA-funded academic program that linked eastern Tennessee college students with tributary development organizations in the area (National Service-Learning Clearinghouse, 2005; Stanton, et al., 1999; Titlebaum, Williamson, Daprano, Baer, & Brahler, 2004). This was followed in 1969, when the first formal definition of service-learning emerged from the Atlanta Service-Learning Conference. It was defined as “the integration of the accomplishment of the tasks that meet human needs with conscious educational growth” (Titlebaum, et al., 2004).
A decade later, the National Center for Service-Learning published the “Three Principles of Service-Learning” in *Synergist*, a journal promoting the link between service and learning (National Service-Learning Clearinghouse, 2005; Titlebaum, et al., 2004). This was immediately followed by many advances in the service-learning field. The National Youth Leadership Council, established in 1983, was the first organization to advocate a vision of service-learning education “through thoughtful and practical service, while at the same time benefiting the communities in which those young people live” (Titlebaum, et al., 2004). David Kolb (1984) published *Experiential Learning: Experience as the Source of Learning and Development*, and created the Learning Style Inventory model of experiential learning. The National Campus Compact was formed by the presidents of Brown, Georgetown and Stanford in 1985, which raised service-learning to the institutional level (Titlebaum, et al., 2004). The decade ended with the 1989 Wingspread Conference and the Minnesota Legislature’s funding the first postsecondary service-learning grants program to provide “incentives for institutions to promote community service” (Titlebaum, et al., 2004).

In 1993, the Wingspread Group on Higher Education noted in the Wingspread Report that “a mismatch exists between what society needs from higher education and what it actually receives” (Hinck & Brandell, 2000, p. 870). A main outcome of the Wingspread Conference, and the publishing of its *Principles of Good Practice in Service-Learning* in 1989, was that, as a new form of experiential education, service-learning was suddenly on the front burner of numerous higher education organizations and on the minds of a group of campus administrators and faculty” (Stanton, et al., 1999, p. 6). Many service-learning professionals began to follow these principles.
This effort supported Boyer's (1990) approach to rethinking and reconfiguring the faculty tripartite of research, teaching and service, to show the interconnectedness of the three components to the continuum between knowledge creation, discovery, integration and application. Hinck and Brandell (2000) noted that Boyer called upon the modern professors to be like their predecessors in the progressive era of higher education and, once again, take the knowledge they created beyond the walls of the campus and into the community. These real-world connections would enhance the theoretical elements of research and teaching, which would enable faculty and students to have an impact on the community, just as the community could affect teaching and learning. Service provided by faculty and students would be rewarded through the knowledge gained from, and shared with, the community, thus fulfilling higher education’s mission to prepare the next generation of educated leaders.

The last decade of the twentieth century began with the passing of the National and Community Service Act of 1990, which provided funding to colleges and universities, as well as nonprofit organizations and other schools, to support service-learning activities and established what is now Learn and Serve America (National Service-Learning Clearinghouse, 2005; Titlebaum, et al., 2004).

Janet Eyler and Dwight E. Giles, Jr. (1999) received funding for their “Comparative Models of Service Learning Project” from the federal government through the Fund for the Improvement of Postsecondary Education (FIPSE) in 1993. This study surveyed 1,500 students to gather student demographics, their perceptions of the benefit of service-learning initiatives, and their preferences for various types of reflective activities. That same year, the Association of Supervision and Curriculum Development endorsed the importance of linking service and learning (National Service-Learning Clearinghouse, 2005; Titlebaum, et al., 2004). This was
followed by the establishment of the *Michigan Journal for Community Service-Learning* in 1994 as the first refereed service-learning journal (Titlebaum, et al., 2004). In 1997, the American Association of Higher Education (AAHE) published the first volumes of *Service-Learning in the Disciplines* monograph series. This effort represented a collaboration between AAHE, Campus Compact and the academic disciplinary associations (Zlotkowski, 2002).

The final two milestones being noted in the development of service-learning as a mainstream pedagogy took place in 2001, when the first International Conference on Service-Learning Research was held in Berkeley, California, and the Learn and Serve America National Service-Learning Clearinghouse was launched (Titlebaum, et al., 2004).

The use of service-learning has continued to expand to more higher education institutions in the last two decades (Stanton, et al., 1999). The increased number of national and international conferences, peer-reviewed journal articles, and books that address service-learning issues by academics who seek more avenues for presenting and discussing their research on this topic is a testament to this growth. The academic credibility of service-learning has emerged in the last 10 years, as demonstrated by faculty member's viewing it as a legitimate pedagogy, and through research conducted and published in peer-reviewed journals on the student learning outcomes (Furco, 2001; Kenworthy-U'Ren, 2008).

Today, service-learning continues to expand on campuses, as documented by Campus Compact’s annual membership survey. How prevalent service-learning is in the curriculum is measured in various ways. For example, National Campus Compact’s (2007b) annual membership survey reported that faculty who offered a course with a service component had increased from 8,000 in 2003-2004 to more than 12,500 in 2005-2006 (a 36% increase). The number of member campuses also increased during this time, from 922 to 1,045 (a 12%
increase), which helps to partially explain the increase in faculty member participation. Campus Compact (2007a) also reported that faculty receiving recognition for their service-learning activities through the tenure and review process more than doubled in five years, from 16% in 2001 to 34% in 2006. It may also relate to a call from external constituents for higher education to return to its roots and increase its commitment to serving its community (Hinck & Brandell, 2000). This is accomplished partially by higher education’s efforts to teach civic responsibility across the disciplines, and to be viewed by the public as providing service as well as being more accountable to the community.

National associations, including Campus Compact and the Corporation for National and Community Service, have focused on expanding service-learning at the institutional level, expecting that if senior administrators (including college presidents) and faculty leaders became interested in this form of experiential education, then individual faculty and students would, too. However, it is still not exactly known to what extent this trickle-down effect has succeeded, and whether the continued expansion of service-learning is moving at an appropriate pace, both with individual institutions and within higher education as a whole.

Kenworthy-U'Ren (2008) noted that “Collectively we have witnessed significant change in our academic environments; teaching today is about real-world, integrated, and enhanced learning. We are no longer expected to teach in disciplinary silos. Today, we are asked to work together, with each other and our communities, to create an educational environment that more clearly reflects our constant changing personal, social, and organizational lives. Service-learning can do just that” (p. 820). Academic institutions are also responding to internal and external forces that are encouraging more civic engagement, and increased relevance and applicability of knowledge generated by colleges and universities (Ostrander, 2004). To continue to move
forward in the expansion and integration of service-learning, we must first gain a better understanding of which faculty are supporting this experientially-based teaching method.

**Faculty Issues**

We need scholars who not only skillfully explore the frontiers of knowledge, but also integrate ideas, connect thought to action and inspire students. ... If the nation’s colleges and universities cannot help, students see beyond themselves and better understand the interdependent nature of our world, each new generation’s capacity to live responsibly will be dangerously limited (Boyer, 1990, p. 77).

Academics are the backbone of institutions of higher education. They teach the students, instilling in them their academic expertise in different disciplines while simultaneously conducting research and providing service to their campus, community, and profession. The faculty’s role in higher education has evolved over time, from being tutors to highly specialized knowledge-creators and disseminators in their academic disciplines. Today there is a growing movement away from being a specialist to one who participates in interdisciplinary activities that can cross the disciplines and connect teaching and learning, research and service. Service-learning is just one of the many interdisciplinary efforts on campus in which the faculty can become engaged.

To understand why some faculty members opt to incorporate service-learning into their academic courses and others do not, it is first critical to understand who they are, their academic careers and accomplishments, their levels of engagement and attitudes, and how they view themselves within their academic discipline and institutions of higher education (Gappa, Austin, & Trice, 2007). This is coupled with the recognition that “faculty members constitute a very diverse group of individuals who often behave idiosyncratically” (Yuker, 1984, p. 26).

Gappa, Austin and Trice (2007) correctly identified one of the key issues when studying the faculty - their diversity. The diversity of today’s faculty is not only seen in their
sociodemographic differences, but also in their academic characteristics and levels of engagement within their institutions, academic disciplines, and the community at large. To compound the complexity of a diverse professoriate is the realization that it continues to change at a fairly rapid pace. The profile of today’s academics is different than it was even two decades ago when service-learning started to become institutionalized with efforts aimed at long-term sustainability.

Two conceptual frameworks can be used to better understand who the faculty are and what are the common factors that may be associated with the use of service-learning. The first is Blackburn and Lawrence’s (1995) “properties of the individual” conceptual framework and its four properties: sociodemographic, career, self-knowledge, and social knowledge. The authors attempted to demonstrate the importance of studying more than the sociodemographic data on American faculty to include the value of knowing how and why professors behave the way they do. The second is Antonio, Astin and Cress’ (2000) conceptual framework that focused on what are the “intrinsic and extrinsic factors that may motivate faculty involvement in service-related activities” (p. 377). They included personal commitment to community service, attitudinal/values measurements, student-centered pedagogy measurements, humanistic and status orientations, college and service opinions, and institutional commitment to service.

It is important to be aware of how the composition of the faculty has changed. The number of full-time faculty practically doubled between 1960 and 1970, which coincided with the significant expansion of American higher education as a result of the GI Bill, the baby boomers’ reaching college age (Schuster & Finkelstein, 2006), and the emergence of service-learning faculty on college and university campuses (Stanton, et al., 1999). These professors
trained at the major research universities and came to their role with the expectation that research would be weighed more heavily than teaching in the faculty reward system.

Student demographics have shifted and grown during the same period to include more minorities, women, and non-traditional students. To meet this new and different kind of student demand, colleges and universities have been recruiting, and will continue to recruit, more professors who focus on teaching, and with the ability to apply different instructional techniques to address the various learning styles associated with a diverse student body (Gappa, et al., 2007). Some colleges and universities are already doing this, either because their focus is on teaching (e.g., community colleges), or through the hiring of non-tenure track faculty and adjuncts. “The typical American faculty member is no longer the research-oriented scholar whose habitat is the research university, but rather resides in the public four-year or community college, and increasingly he or she is a part-timer at that” (Schuster & Finkelstein, 2006, p. 47). Yes, even with these changing working conditions, “academics value tenure, and tenure remains the prototype of the ideal academic career” (Gappa, et al., 2007, p. 54). It will be interesting to see how this shift reveals any differences or similarities in faculty workload preferences and attitudes toward the tripartite and service-learning specifically.

Composition of the Faculty

Sociodemographic data analysis is the most common method for determining the composition of faculty in American higher education. It looks at gender and minority status, as well as age distribution, to see if patterns appear as to which groups of faculty are more likely to use various forms of pedagogy, such as service-learning. Sociodemographic data can be an important indicator because of the concerted efforts to diversify the professoriate over the last few decades, thus reducing our ability to make generalizations about faculty, who they are and
the choices they make. “The increasing diversity of faculty members has important implications for their integration into their campuses, for their ability to create an acceptable balance between their work and personal lives, and for their satisfaction with their academic careers” (Gappa, et al., 2007, p. 58).

Gender, minority status, and age are the most visible forms of diversity among faculty. These are found more among the early-career and mid-career faculty ranks due to the recent increase in advanced degrees obtained by women and minorities, as well as institutional hiring practices to recruit more members of underrepresented populations in the academic ranks since the expansion of American higher education.

Women continue to be in the minority of the full-time faculty regardless of their rank, even though their numbers have significantly increased. Schuster and Finkelstein (2006) reported that an increase in full-time female faculty members doubled from 17.3% in 1969 to 35.9% in 1998. Women were even more represented at the early-career (44.2%) and mid-career (43.3%) stages of academic life in 1998 (p. 51). The trend seems to level off, with 37.5% of all faculty being women in 2001 and 39.4% in 2007 (Lindholm, et al., 2002; Lindholm, et al., 2005). The U.S. Department of Education reported in 2005 that women represented 40.6% of all full-time faculty members and 41.8% in 2007, although they had a larger representation in the lower faculty ranks. Almost half of all assistant professors were women (47.3%), while 39.7% of associate professors and 26.5% of full professors were women (NCES, 2009). This increase in female professors over the past several decades demonstrates the efforts by colleges and universities to address the gender imbalance in academia. A potential association between the increase in female faculty and their preference for using service-learning and other forms of student-centered pedagogies is that they prefer their roles as teachers more so than male faculty
do. "But it remains unclear whether the preference stems from real or perceived exclusion from the research role, from the formal demands traditional (male) research imposes, or from female needs for nurturing" (Blackburn & Lawrence, 1995, pp. 44-45). DeAngelo, Hurtado, Pryor, Kelly, Santos and Korn (2009) found that, while gender was not a factor in the professors' view of their role as teachers, female faculty devote more time to teaching and male faculty prefer allocating their time to research. This might be related to their rank, academic discipline, and access to external funding.

While this demographic shift is taking place, it is not surprising to find that what is viewed as the typical professor (e.g., "a native-born white male in the arts and sciences) has decreased in numbers from 46% of the faculty in 1969 to 28.6% in 1998 (Schuster & Finkelstein, 2006, p. 71). However, this view of the Caucasian male professor does not provide the entire picture of minority and non-minority faculty. In 2001-2002, 90.0% of all faculty in four-year institutions were White/Caucasian, followed by 4.2% Asian American/Asian and 2.5% African American/Black (Lindholm, et al., 2002, p. 21). The percentage of White/Caucasian faculty slightly decreased by 2007 to 88.6%, while Asian American/Asian faculty increased to 4.5% and African American/Black faculty increased to 2.8% (DeAngelo, et al., 2009, p. 54). The value of considering the minority status of faculty may reside in the way faculty perceive and interact with their work environment, as well as their productivity and motivation (Blackburn & Lawrence, 1995).

In terms of age, the current composition of faculty includes more professors' nearing retirement due to the large hiring spree that took place 30-40 years ago when American higher education quickly expanded. In 1969, faculty members included 22.5% who were 50 years of age or older and 33.1% who were no more than 35 years of age (Schuster & Finkelstein, 2006).
Lindholm, Astin, Sax and Korn (2002) confirmed that this trend toward an older professoriate, with the largest group of faculty being 55 or older (36%), followed by the 45-54 age group (35%), and with those who are 35 or younger representing 30%. By 2007, faculty who were 55 years of age or older had increased to 39.2% (DeAngelo, et al., 2009). It is important to have a basis for understanding of the age distribution of faculty when considering the influence that senior faculty could have on junior faculty, who are attempting to balance workload issues and striving for advancement.

Of interest today in American higher education is the aging of the faculty because of the value of having academic continuity in the faculty over time, as well as the relationship between faculty and their institutions. One possible implication of the aging of the faculty and the subsequent imbalance is that more than half of faculty in 2001-2002 (Lindholm, et al., 2002) had potentially earned tenure, or obtained enough status as long-term faculty to have had a significant influence on junior faculty in terms of how they should balance their teaching, research and service obligations. This could have an impact on the decision-making process for implementing various teaching methods, including newer student-centered pedagogies like service-learning that require more time to implement than the traditional lectures. How the academic culture shifted in conjunction with the aging of, and turnover within, the faculty over the next decade should be an interesting process to observe.

Gappa, Astin and Trice (2007) wrote, “As faculty members become less homogeneous, individual priorities and circumstances become more complex, and collegiality and the sense of a common community of scholars becomes more difficult to develop and support” (p. 64). This leads to Blackburn and Lawrence’s (1995) conceptual framework for understanding who the
faculty are through an analysis of career data, such as academic appointment, academic
discipline, and the type of institution where each professor works.

Faculty are typically divided among various groups of academic disciplines: science and
engineering, social science, arts and humanities, and professional disciplines. Several
researchers (Mundy, 2004; Whitmire, 2002) have used Biglan’s (1973) classification of
academic disciplines that categorize them by whether they are pure or applied, hard or soft, and
life or non-life disciplines. The operational measures of these categories include the social
connectedness, such as working with others or the sources of influence, and the level of
commitment, as defined by the preferences for, and time allocated to, different tasks (p. 206).
For example, the business, education, and professional disciplines are part of the applied
disciplines, since faculty in these groups prefer to collaborate on teaching, report more sources of
influence on their research, and are involved in service activities (p. 209).

Zlotkowski (2001) noted that faculty associate their workload responsibilities with the
academic disciplines in which they earned their degrees (p. 26). How a faculty member balances
the tripartite of teaching, research and service can be influenced by the graduate educational
experience mostly at major research universities and the external influences from the academic
discipline associations. If they had been exposed to service-learning or other experiential
teaching and learning methods during their graduate studies, then it is possible that they may be
willing to use these pedagogical practices as professors. The increase of service-learning in the
last two decades may be associated with younger faculty who are more inclined to use it.

At the same time, a majority of academic disciplines do encourage faculty to include
service-learning or other forms of student-centered pedagogies in their courses; however, there is
a variation in the percentage of faculty in each discipline that use it. This could be related to how
involved faculty are in their academic disciplines outside their institutions and whether they devoted any attention toward the institutional community, as well as the differences between the disciplines. Gouldner (1958) divided the professors into these two groups, based on their areas of involvement, and labels them the “cosmopolitan” and “local” faculty. Another explanation is that internal pressures from within an academic department, which is also organized around academic disciplines, can affect the professor’s workload, behavior, attitudes and preferences. Therefore, it is important to look at how one’s academic disciplines may influence the decision whether or not to include service-learning in an academic course.

Academic status, as defined by rank and tenure data, can reveal trends in how a faculty position within an institution can influence decisions about teaching methods, as well as research and service activities. There are generally three major academic appointment groups in American higher education today. They are: the tenure/tenure track faculty who traditionally balance teaching, research and service; the non-tenured faculty, also known as renewable contract or term faculty, who focus on either teaching or research; and the temporary faculty who are mostly part-time adjuncts hired to teach specific courses (Gappa, et al., 2007). Each group has their own behaviors, attitudes and perceptions about their work and about their place within the institution and academic discipline. While the academic status category primarily focuses on academic rank, it can be used to make associations with a professor’s career age, which is the number of years spent in academic positions, and whether or not tenure has been achieved. Career age is different from chronological age because it captures those who may have become full-time faculty later in life. Other categories that could be included in the career data are professional accomplishments, tenure status, hours per week spent on different academic
activities, and longevity or the number of years working at a current institution (Blackburn & Lawrence, 1995).

Academic status is also important when related to gender. West and Curtis (2006) found that women were underrepresented in tenure-track positions, had not attained senior faculty rank at the same rates as men, and earned less than men. When factoring in institutional type, there were fewer full-time female faculty members at doctoral institutions (34.1%) than at master’s (42.3%) or baccalaureate (41.9%) institutions in 2005-2006 (pp. 6-7).

This research focuses on full-time faculty at four-year institutions, with the expectations that their decisions to use service-learning or not is partially based on the type of position they hold, the extent to which they focus on teaching, and the type of institution where they work.

What is Important to the Faculty?

Understanding what is important to faculty can be accomplished by studying their attitudes, beliefs, values and perceptions about their role in academia. “Faculty involvement is focused on the individual behaviors and time choices made by faculty as a reflection of their personal adoption of service as a component of their professional work” (Holland, 1997, p. 37). This is necessary for determining how they make decisions about what pedagogical methods to use, allocate their time between teaching, research and service activities, and interpret their work environment. These elements make up the self-knowledge construct proposed by Blackburn and Lawrence (1995). They also are included in the composite variables created by Antonio, Astin and Cress (2000) to measure teaching and research preferences, attitudes and values, personal commitment to community service, and student-centered pedagogy commitments.

While there is little research about educational policies relating to differences in faculty workload, what does exist points to an increase in the number of hours per week faculty spend on
teaching-related activities and how faculty allocate their time (Kenworthy-U'Ren, 2008). According to Schuster and Finkelstein (2006), “faculty work consists of a great variety of activities that are critical to the educational missions of their institutions and which go quite beyond actual hours in the class, preparation for classes, or interaction with students” (p. 78). In 2004-2005, faculty members reported that they “spend roughly equivalent amounts of time preparing to teach, fulfilling scheduled teaching commitments, and engaging in research and scholarly writing” (Lindholm, et al., 2005, p. 10). What the report does not mention is whether this allocation relates to how professors prefer to schedule their work, or if there are other factors that influence it. Information found within the workload and work preference conceptual frameworks can provide an important basis for analyzing other factors that may be associated with the use of service-learning.

Results from the 2004-2005 HERI Faculty Surveys show that a larger percentage of faculty spent less than nine hours on scheduled teaching (38%) than those who taught more than 12 hours per week (30%). On the research side, 57% of faculty spent no more than four hours on research and scholarly work each week, while only 15% spent more than 12 hours. Half of all faculty (50.5%) spent one to four hours per week on community or public service, while more than one third (38.1%) of faculty devoted no time to such activities (Lindholm, et al., 2005). These statistics might relate to the difference between academic status, academic discipline, institutional type, as well as other workload issues. The chance to further analyze the sociodemographic, career, and institutional variables could further clarify how these results translate into faculty behavior and attitude toward various faculty responsibilities.

The level of engagement with colleagues in an institution and academic discipline can have an effect on faculty behavior, attitudes and perceptions. Blackburn and Lawrence (1995)
included these variables in the self-knowledge construction. For example, the influence that the associate and full professors have on junior faculty, and especially on those on the tenure track, could be significant in the way that the junior faculty prioritize their teaching, research and service obligations and the choices they make regarding teaching methods to employ in the classroom. The weight of, and time devoted to, each part of the faculty work tripartite is not only determined by the individual faculty member; it is also influenced by the department, the institution’s leadership, and the academic discipline (Gappa, et al., 2007; Yuker, 1984). In terms of the value placed on teaching, Lindholm, Astin, Sax and Korn (2002) reported that “86% of faculty feel their teaching is valued by other faculty in their departments” (p. 9), thus demonstrating the importance of peer recognition as a predictive variable. The pedagogical differences among faculty members at different stages in their career are worth investigating to see if there is any correlation within other faculty workload and decision-making variables.

The individual faculty member, whether at the beginning of an academic career or now a senior member of a department, continually attempts to balance the academic workload with varying degrees of emphasis on each component at different points in his or her career. “How people allocate their work effort reflects their interest in different activities – assuming that the job provides options” (Blackburn & Lawrence, 1995, p. 82). How research, teaching and service are weighed has had a significant impact on how faculty members allocate their time and workload, and may be directly related to the faculty reward system, including tenure and promotion, as well as the allocation of resources and the differences between undergraduate and graduate education (Fairweather, 1996; Schuster & Finkelstein, 2006). Moreover, there is a difference between actual workload and work preferences when it comes to balancing time spent on teaching and research, more so than on service with those who prefer teaching rather than
research also spending more hours per week on class preparation (Yuker, 1984). Service-learning requires more class preparation and implementation, and therefore may be linked to a greater preference for teaching.

While teaching is expected of everyone, the underlying view in American higher education is that research is the key to obtaining tenure and advancement (Lucas, 2006). The amount of time each week spent on teaching and research activities may be linked to the debates over the "publish or perish" phenomenon that took place during the latter part of the twentieth century, around the same time that service-learning became a more acceptable teaching method. Not only was the emphasis on publishing found in the research universities, but it was also becoming more prevalent in the smaller liberal arts colleges that traditionally had focused on teaching more than research.

Faculty may prefer teaching and trying various pedagogies in the classroom, but must prioritize the scholarly work to gain tenure. Others may want to spend all their time in the research lab with the assistance of graduate students, but be required to teach undergraduates to meet the curricular needs of the department. It will be interesting to see if results of the FSSE and HERI data obtained for this study show the relationship between faculty orientation toward research, teaching and service-learning use.

Even if a faculty member prefers teaching over research, there is the recognition that research cannot be ignored if there are aspirations for advancement. In fact, junior faculty members on a tenure track are more susceptible to the dilemma about whether they should engage in potentially time-intensive student-centered pedagogies if they could enhance the learning experience of students, possibly at the expense of time spent on research. "A popular but often unspoken warning among junior professors, especially at research institutions, is to
avoid the impression of spending too much time on teaching” (Fogg, 2006). The data supports this notion that teaching is valued less than research, with only 15% of faculty in 2001 feeling that their institutions rewarded good teaching (Lindholm, et al., 2002). This is a small percentage, considering it shows that 85% of the faculty either have remained neutral or do not agree that their institution supports good teaching.

Institutional pressure for faculty to be more research-active, in spite of teaching obligations, continues to influence how faculty allocate their time. “While many large research institutions say they value teaching, when it comes time for tenure evaluations research is usually the No. 1 concern, especially at public institutions” (Fogg, 2006). Schuster and Finkelstein (2006), however, reported that there has been a current trend toward recognizing that junior faculty need – and have received – more of a balance between teaching and research to address the workload pressures to obtain tenure, with senior faculty being required to continue high teaching loads to compensate for this. This is coupled with an increased focus on research that has not necessarily reduced the teaching load, resulting in faculty reporting that they are working more hours each week than in past decades.

One variable option for professors who seek to balance teaching, research and service is to find ways to merge some or all of the faculty work tripartite together within a given project. Activities that could count toward teaching, research or service may help to balance, or at least better justify one’s actions in areas that others might find to be a poor utilization of time. In addition, connections between the different components of the faculty workload can become the basis for innovative classroom instruction and published research (Lucas, 2006).

Some faculty have identified ways that their teaching, research and community involvement are interrelated forms of scholarship, while others view the faculty tripartite roles as
separate functions that should remain as such. Bloomgarden and O'Meara (2007) regard these groups as those that are most likely and least likely to incorporate service-learning into their courses. Even student involvement in faculty research was regarded by the latter group as a function of teaching the students how to do research, rather than viewing the students as an important resource for advancing the faculty member's research agenda. In their study on faculty role integration and community engagement, Bloomgarden and O'Meara (2007) found that the "connection between community efforts and pedagogical or curricular goals was far more common than connections to research goals" (pp. 13-14).

If the younger faculty members are more inclined to experiment with newer student-centered pedagogies while wanting to simultaneously focus on those activities that could impact advancement, then they need to figure out how to balance and possibly merge their teaching interests and research goals. "Generally speaking, early career faculty are more inclined than their mid-career and advanced career colleagues to employ student-centered teaching and evaluation methods" (Lindholm, et al., 2005, p. 24). The value that professors place on peer recognition for their teaching and research activities could also help to explain why some are more inclined to make certain teaching and research choices.

To create a workload balance, faculty must be willing to include not only their students in their research, but also the community agencies and their clients who participate in the service-learning projects. Research involving multiple contributors could impact the direction and outcome of the research project. While this may not be a professor's first preference when conducting research, it might be necessary to create a plan for incorporating service-learning activities into a research agenda that strives to ensure the level of collaboration and cooperation with other service-learning stakeholders (Bass & Silverstein, 1996).
To successfully integrate service-learning on a college or university campus, Bringle, Games, Foos, Osgood, and Osborne (2000) researched service-learning with a focus on the recruitment, development and level of participation in service-learning by the various stakeholders. They proposed that the focus on service-learning within the curriculum must include consideration of what can be done to develop each part of the service-learning triad consisting of faculty, students and community partners, as well as with the colleges and institutions. This effort, the researchers proposed, should be to increase the “integration of and balance among the elements of the tripartite division of academic life: teaching, research, and service” (p. 883).

Service-learning, which generally requires more teaching preparation time and coordination than a class lecture, is a prime example of a pedagogy that could count toward, and include, research and service. It is also one that has been proven to link theory and practice - a learning method many students embrace. Faculty members who are willing to try different teaching methods tend to be more open to changing their style to meet the needs of a diverse student population. They may also have an interest in showing students the connection between theory and practice and demonstrating this by linking their own research agenda to the courses they teach. On the other hand, faculty who prefer research to teaching may opt to continue using more traditional methods of teaching, such as extensive lecturing. Yet, service-learning is most often used in conjunction with other forms of pedagogy. Zlotkowski (2001) noted that service-learning should be viewed as an instructional method that works with lecturing, rather than replacing it (p. 29).

Regardless of academic status, some faculty are more engaged in the internal activities of their departments and institutions, while others focus their attention outwards (Gouldner, 1958).
How the "cosmopolitan" faculty handle this depends on how they balance these two "worlds."

For professors who find an institution that shares the same commitment to innovative and student-centered pedagogy, they may be more inclined to participate in faculty development opportunities and institutional reform efforts. The HERI and FSSE datasets obtained for this dissertation highlight which scenario most likely describes service-learning and non-service-learning faculty.

Service obligations should not be ignored, even though the debate on priorities within the faculty work tripartite mainly focuses on teaching and research (Jaschik, 2007). Service to the institution continues to be preferred over service to the community, with 63% of faculty during a two-year period reporting that they had been involved in institutional efforts to reform the overall institutional mission or purpose and 62% having been involved in changing faculty roles and rewards (Lindholm, et al., 2002). It was recently noted that faculty generally report spending an average of 4-5 hours per week on service-related activities (Jaschik, 2009). It would be interesting to learn which groups of faculty, based on Gouldner’s (1958) article, are more likely to keep a "local" focus in their service obligations, directed internally to the institution, and which are more prone to have an external or "cosmopolitan" approach to service that is directed outwardly toward the academic disciplines, as well as whether this is affected by the institutional reward system. This information could serve to identify which faculty members are more likely to be willing to use service-learning in their courses.

Schuster and Finkelstein (2006) reported that there is some discrepancy between how and where faculty focus their involvement in campus governance. While the faculty are less involved in academic affairs and governance, more are reporting that they are very involved in
departmental activities, and to a lesser extent in campus-wide governance. Senior faculty are more engaged in institutional activities than junior faculty.

Part of the self-knowledge construct is the professor's level of engagement in his or her work and institution. According to Gappa, Austin and Trice (2007), faculty “have retained their positive attitudes about their academic careers even though their workloads have escalated and their salaries have not always kept pace with inflation” (p. 103). Job satisfaction indicators, such as attitudes toward work and relationships with colleagues, are important for better understanding as to why professors make the choices that they do with regard to teaching, research and service. The results of the HERI Faculty Surveys showed improvements in the faculty’s attitudes toward their work, the opportunities for scholarly pursuits, and their relationship with peers at their institutions. Positive faculty job satisfaction increased from 69% in 1989 to 78% in 2004. Their satisfaction with the opportunities for scholarly pursuit increased from 45% in 1989 to 61% in 2001 (Lindholm, et al., 2002; Lindholm, et al., 2005).

In 2004, two-thirds (66%) of faculty believed they had good relationships with their peers, with 85% noting that their teaching was valued, and 66% noted they had similar support for their research (Lindholm, et al., 2005). Of interest was the professors’ beliefs that their teaching was valued more than research in their department, even though they weigh research more heavily in the tenure and promotion process, which begins at the departmental level. One possible explanation can be found in the existing academic status of department faculty (e.g., they were either tenured, on a tenure track or in a term position). Another key factor may be whether a majority of respondents to the HERI Faculty Survey were at the advanced, mid-career or early stages of their careers.
The linking of teaching and research most likely appeals to a certain type of professor, one who believes in student-centered learning approaches to teaching and is willing to spend more time implementing such pedagogical techniques. Factors that may contribute to faculty’s emphasizing teaching or research include the type of four-year institution where they work, teaching obligations, tenure or promotion requirements, and the pressure to publish. When research becomes integrated with the teaching load, faculty have more opportunities to fulfill both academic responsibilities (Bass & Silverstein, 1996), such as enabling undergraduate students to use classroom projects to assist with basic data collection needed for the faculty’s research project.

Some groups of faculty are finding it challenging to meet service expectations that can infringe on research time and teaching obligations. This may be due to a perceived need to work significantly harder than their colleagues in order to be viewed as a legitimate scholar. Gender and minority status has contributed to this perception (Lindholm, et al., 2005). In addition, “while over two-thirds (68%) of faculty indicate that the criteria for advancement and promotion at their institutions are clear, substantially fewer (53%) are satisfied with their perceived prospects for career advancement” (Lindholm, et al., 2005, pp. 17-18). There is some evidence of a potential rift between what is expected of faculty, what is needed for advancement, and their work preferences. If about half of the faculty are not satisfied with opportunities for advancement, then there is a chance that this group may opt to lead their teaching and research efforts in ways that are personally rewarding rather than in directions that guarantee advancement. It would be interesting to see if this is the group that incorporated service-learning into their courses, as well as whether obtaining recognition from one’s peers factored into this decision.
The allocation of work to teaching, research and service is primarily at the discretion of individual professors. This can be greatly influenced by internal pressures, such as how courses are scheduled or policies established for tenure and promotion (Rice & Austin, 1990). If institutional leaders want to encourage more professors to incorporate service-learning into the curriculum, then they should first understand why some faculty are drawn to this student-centered pedagogy and others are not. The development of resources and incentives can then be put into place, including faculty workshops, model syllabi, stipends, rewards and recognition, and guidelines on how such participation would count toward the faculty workload tripartite (Bringle, Games, Foos, Osgood, & Osborne, 2000; Macduff, 1994). This is especially important for junior faculty, who not only need to do the work necessary for advancement but also greatly benefit from mentors and peers. Academic professional associations can also support faculty by providing many of these resources and reinforcing the value of such endeavors.

**Faculty and Service-Learning**

It requires passion and perseverance. It takes more time and energy than traditional classroom experiences. It requires change on the part of most faculty members, both in terms of personal approach and classroom environment. It takes acknowledgement that there are often no right answers, rather, information retrieval and processing is partial, biased, and often disjointed. Service-learning challenges us to rethink what our roles as educators are, both in terms of our university and our community citizenry. It also challenges us to examine our fears, biases, and strengths (Kenworthy-U'Ren, 2008, p. 819).

Many scholars (Bringle, et al., 2000; Bringle & Hatcher, 1996; Furco, 2002a; Henderson, Fair, Sather, & Dewey, 2008; Zlotkowski, 1996) agree that faculty support and involvement is critical to the implementation and institutionalization of service-learning, because it is the faculty who are responsible for the curriculum. Faculty should agree that their involvement is needed, and must see that their use of service-learning is directly linked to the benefits they receive from participating. “The faculty’s role is to help students achieve academic success as well as further
their own professional development” (Henderson, et al., 2008, p. 115). While service-learning may never be fully integrated into the curriculum due to the diversity of faculty and pedagogical preferences or training, it is important for academic and institutional leaders to know the common profiles of faculty who would most likely use service-learning (Abes, Jackson, & Jones, 2002).

Billig and Furco (2002) observed that service-learning’s interdisciplinary nature has resulted in the use of a “wide variety of theoretical and disciplinary frameworks to investigate a broad range of program outcomes” (p. vii) that makes it more challenging to centralize and advocate for more research in this area. At the same time, those most likely to research faculty issues in higher education are only a percentage of all faculty who may be involved in service-learning or want to do research in this area. Higher education faculty most likely have many more research ideas to investigate, and service-learning may only become of interest if they have had direct experience with it.

To understand which faculty members are more likely to incorporate service-learning into their courses, it is first important to recognize some of the common traits of service-learning faculty. Beginning with the pioneers, service-learning faculty must believe that they have the ability to impact student learning and are committed to teaching civic responsibility (Stanton, et al., 1999). This is a critical element when developing a pedagogy outside of mainstream academia. DiPadova-Stocks (2005) discussed the reappearance of civic responsibility in American higher education, starting with the pioneers, and then continued to gain momentum through the efforts of junior faculty willing to use service-learning, academic leaders promoting the idea of encouraging students to be more civic minded, and professional associations dedicating efforts to develop resources and networks to sustain service-learning. Part of
DiPadova-Stock’s analysis relied on the junior faculty, often in the most tenuous employment positions, to work toward institutionalizing service-learning, rather than on senior faculty who are in leadership positions and involved in institutional and departmental reform efforts. Astin and his colleagues confirmed that the junior faculty were using service-learning more than senior faculty (Astin, Vogelgesang, Ikeda, & Yee, 2000; Astin, et al., 2006).

The service-learning pioneers laid the groundwork for faculty to develop a different kind of relationship with their college or university and with their community. For these faculty members, the “combination of internal values and external support greatly influenced the professional directions they took” (Stanton, et al., 1999, p. 76). They were willing to take risks and be actively involved in efforts to change their institutional culture, which then made it possible for the second wave of faculty to embrace service-learning after it had been tested and proven successful (Rothman, et al., 1998). Today’s service-learning faculty have benefited from the groundbreaking efforts of the pioneers. This has been critical, as they learned to use a mix of traditional and student-centered pedagogies to meet the varied learning needs of a more diverse student population (Gappa, et al., 2007).

Service-learning has become a more common option of student-centered pedagogy, even though it is not completely institutionalized throughout higher education. Regardless of how the idea to incorporate a service-learning component into an academic course is promoted, the professors are the ones who ultimately make the decision whether or not to use this pedagogy in their courses. Yet, little is known as to what factors may contribute to a professor’s willingness to participate in service-learning activities. While most of the research on service-learning has focused on the students, there is a recognized need to research faculty involvement in service-learning (Billig & Eyler, 2003; Driscoll, 2000; Pribbenow, 2005). Billig and Furco (2002)
consider this need to be a critical stage if service-learning is to be an accepted and sustainable teaching and learning tool. It is important to identify the factors that are associated with faculty who incorporate service-learning into their courses, and the benefits and challenges to creating an active and engaging learning environment for their students. "The challenge for service-learning faculty members is to maintain the integrity of the academic goals, recognizing that teaching and learning can be explored outside the traditional classroom setting" (Olsen, 1997). Bacon (2001) highlights six areas for future service-learning research; the impact of service-learning on faculty was one of the six.

Following the trend of scholarly articles, Lyons Frolow (2005) found that there is also a gap in the dissertation research focusing on faculty and service-learning. In a review of service-learning dissertations, the researcher found that most focused on the student’s involvement in service-learning, such as their attitudes and perceptions about the problem or issue being addressed, or their academic learning, academic outcomes, and impact on career choices. This tends to give a one-sided perspective as to the benefits and challenges of including service-learning activities in an academic course. When faculty data were included, results were primarily limited to faculty feedback or perceptions on the students’ experience with service-learning.

Even though there is a gap in the literature on faculty and service-learning, there are still some researchers who have written on this topic. Some either collected data from interviews (Bloomgarden & O'Meara, 2007), creating their own surveys (Abes, et al., 2002; Banerjee & Hausafus, 2007; Hammond, 1994), or carried out qualitative research activities (Chadwick & Pawlowski, 2007; Schnaubelt & Statham, 2007). The researchers at the Higher Education Research Institute (HERI) at University of California, Los Angeles, have used their national

Banerjee and Hausafus (2007) studied the professional and demographic characteristics of human service faculty, along with their perceptions of service-learning and the factors that motivate or deter their use of this pedagogy. Key factors that were considered include academic rank and gender, as well as respondent’s teaching, research and service responsibilities. The researchers found that respondents were most likely assistant professors (33.0%), followed by associate professors (27.4%) and full professors (21.9%). Teaching was predominantly the major professional responsibility (82.8%) of service-learning faculty, as opposed to 74.0% of non-service-learning faculty. Service-learning professors were more often female (87.5%) than non-service-learning professors (79.5%). Finally, determinants that could increase the likelihood that faculty would use service-learning for the first time included adjustments to teaching load, the relevance to course content, and visible support from academic leadership or degree requirements for students.

Hammond’s (1994) study showed that the service-learning faculty were established in their institution with a strong commitment to teaching, a third being full professors, and slightly more than half being male. A significant relationship between gender and academic rank among the service-learning faculty was also identified. Given the timing of this survey in the early 1990s, those that reported using service-learning were committed to the university-community partnership and most likely on the forefront of the service-learning movement, which required faculty to be secure in their positions within their institutions before becoming involved in an initiative outside mainstream academia.
In terms of satisfaction, Hammond (1994) reported that most (62.5%) agreed that service-learning contributed to their scholarly research, even though less than half (45.7%) noted that it lead to any scholarly outputs. Challenges to using service-learning included the need to connect service-learning and research activities and the increased time needed for developing and implementing service-learning. However, it was determined that service-learning faculty were “driven more by curricular concerns than by personal or co-curricular issues. ... derived satisfaction from their academic freedom to choose service-learning, from the sense of meaning and purpose associated with their efforts, and from the positive feedback they received from students and colleagues” (Hammond, 1994, p. 27).

Abes, Jackson and Jones (2002) sought to identify factors that motivated and deterred faculty to use service-learning based on institutional type, academic discipline, faculty rank, tenure status and gender. Faculty-led initiatives were more likely to have broader faculty participation than institutional-led initiatives, although the extra time needed to run a service-learning course, as well as the type and amount of support that institutions provided to faculty, was viewed as either a benefit or obstacle to participation. Associate professors (55.5%) were more often using service-learning than professors (45.6%) and assistant professors (42.5%). Women reported using service-learning more than men (59% versus 39%). The time intensiveness of service-learning courses was an issue cited significantly more often by assistant professors (74%) than by full professors (45%) and associate professors (36%), and at nearly the same rate by men and women (38% and 40% respectively). Faculty in the social and behavioral sciences (62%) were the most likely to use service-learning, while faculty who taught mathematics, engineering and computer science (18%) were the least likely. Of note in their findings was that tenure and promotion were less of an issue than anticipated.
Abes, Jackson and Jones (2002) concluded that departmental support and a faculty member's commitment to using service-learning as a teaching and learning tool to increase students' understanding of course materials were critical to the success of service-learning at a college or university. At the same time, they noted that a lack of common definition of service-learning could be a significant deterrent to the institutionalization of this pedagogy (p. 15).

Schnaubelt and Statham (2007) looked at the relationship between faculty service activities and a series of sociodemographic and academic characteristics, such as gender, academic rank, tenure status, and institutional type. Disciplinary and department-level factors were found to be more significant than factors at the institutional level, thus reinforcing the idea that how faculty perceive the amount and type of support they receive from their colleagues in their departments can impact how they allocate their workload and their pedagogical choices.

The research using the 2004-2005 HERI Faculty Survey included a variety of items designed to assess attitudes, behaviors and actions relating to the use of service-learning and other experiential learning activities. These included teaching a service-learning course, the emphasis that institutions place on civic education and community involvement, and a belief that colleges and universities have a responsibility to address societal issues (Astin, et al., 2006). Astin and his colleagues (2006) found in their HERI Faculty Surveys that the junior faculty were using service-learning more than senior faculty, and that faculty in the applied academic disciplines, such as agriculture/forestry and education, were more likely to use service-learning than in any of the other disciplines sampled in their study.

The HERI Faculty Surveys include several questions directly and indirectly related to the use of service-learning. First, a question about teaching a service-learning course within the last two years has been included in the survey since the mid-1990s (Lindholm, et al., 2002). In its
2001-2002 survey, HERI reported that 21.3% of respondents at all higher education institutions reported teaching a service-learning course within the past two years. More faculty at universities and four-year institutions (21.6%) than at two-year colleges (20.1%) responded positively to this question (Lindholm, et al., 2002). The 2004-2005 HERI Faculty Survey reported that 20.7% of respondents at all higher education institutions taught a service-learning course within the past two years. Once again, the percentage was higher for all university/four-year institutions (21.1%) and lower for all two-year institutions (19.3%), even though overall it was lower than reported three years earlier (Lindholm, et al., 2005). This decrease was not explained in the report despite Campus Compact's (2007a) reporting a continual increase in faculty participation.

Table 1: Faculty teaching a service-learning course within the past two years at four-year institutions (2001-2002)

<table>
<thead>
<tr>
<th></th>
<th>All Univ. and 4-Year</th>
<th>Universities</th>
<th>Four-Year Colleges</th>
<th>All</th>
<th>Private</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Public</td>
<td>Private</td>
<td>Public</td>
<td>Private</td>
</tr>
<tr>
<td>All</td>
<td>21.6</td>
<td>22.3</td>
<td>19.3</td>
<td>23.3</td>
<td>19.6</td>
</tr>
<tr>
<td>Male</td>
<td>20.1</td>
<td>21.8</td>
<td>18.1</td>
<td>21.3</td>
<td>17.2</td>
</tr>
<tr>
<td>Female</td>
<td>24.4</td>
<td>23.5</td>
<td>22.1</td>
<td>26.6</td>
<td>23.2</td>
</tr>
</tbody>
</table>

(Lindholm, et al., 2002, pp. 28, 54, 80)

Table 2: Faculty teaching a service-learning course within the past two years at four-year institutions (2004-2005)

<table>
<thead>
<tr>
<th></th>
<th>All Univ. and 4-Year</th>
<th>Universities</th>
<th>Four-Year Colleges</th>
<th>All</th>
<th>Private</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Public</td>
<td>Private</td>
<td>Public</td>
<td>Private</td>
</tr>
<tr>
<td>All</td>
<td>21.1</td>
<td>22.2</td>
<td>20.3</td>
<td>20.4</td>
<td>20.8</td>
</tr>
<tr>
<td>Male</td>
<td>19.1</td>
<td>21.4</td>
<td>18.4</td>
<td>17.4</td>
<td>18.0</td>
</tr>
<tr>
<td>Female</td>
<td>24.4</td>
<td>23.7</td>
<td>24.4</td>
<td>24.7</td>
<td>24.8</td>
</tr>
</tbody>
</table>

(Lindholm, et al., 2005, pp. 34, 58, 82)

Table 1 and Table 2 show the percentage breakdown of all responses to the HERI Faculty Survey, as well as for male and female responses, for this question for four-year institutions only,
as this dissertation does not focus on faculty at two-year institutions. In 2001-2002, a greater percentage of faculty at public institutions than at private institutions were teaching service-learning courses within the last two years. This shifted slightly in 2004-2005, when the percentage of faculty at public and private four-year colleges became virtually the same, with just a smaller percentage of faculty at private colleges teaching service-learning. Overall, women were more likely than men to teach a service-learning course in the last two years.

The second service-learning question in the HERI Faculty Survey asked how often faculty included a community service component in their courses. It was reported in 2001-2002 that only a small percentage (5.1%) of all faculty at four-year colleges and universities including community service as an instructional method in most or all of their undergraduate courses (Lindholm, et al., 2002). This percentage increased to 6.7% in 2004-2005 (Lindholm, et al., 2005) and to 8.1% in 2007-2008 (DeAngelo, et al., 2009). These figures would have been higher if the researchers reported the percentage of faculty who included this teaching and learning tool in some of their courses, a third option for answering the survey question.

While one fifth of the faculty taught a service-learning course, more than a third (36.4%) believed that many courses at their institutions involved students in community service (Lindholm, et al., 2002). This finding may be attributed to service-learning faculty’s discussing their experiences and findings with their colleagues more often than faculty who use other pedagogical methods, and therefore giving the impression that it is used more frequently.

Faculty, in 2001-2002, reported the first increase in use of experiential learning/field studies, for which service-learning is one option, as a selected instructional and evaluation method, up from 19% in 1998 to 22% in 2001 (Lindholm, et al., 2002). Twenty-nine percent of female faculty and 18% of male faculty reported using experiential learning/field studies during
this period. Extensive lecturing, on the other end of the pedagogy spectrum, was the one area where male faculty reported using this instructional method more than female faculty at a rate of 55% to 34% (Lindholm, et al., 2002). The results confirm that there are differences between teaching styles of men and women, with women preferring student-centered instructional methods and men preferring more traditional pedagogies. This may help to explain why women are more likely than men to utilize service-learning in the classroom.

Beliefs and attitudes, as previously mentioned, could be associated with the pedagogical decisions that faculty make. In 2001-2002, 65.0% of the faculty believed that colleges in general should be actively involved in solving social problems (Lindholm, et al., 2002), which increased to 71.0% in 2007-2008 (DeAngelo, et al., 2009). On an institutional level, 27.5% of faculty in 2001-2002, and 35.1% of faculty in 2007-2008, reported that it was a high to highest priority to help students learn how to bring about change in American society (DeAngelo, et al., 2009; Lindholm, et al., 2002). These results show a growing sense at colleges and universities toward the importance of faculty and students being involved in their communities. The implications of these results are that Zlotkowski’s (1996) views from a decade earlier still hold true in that only a few professors are willing to incorporate civic responsibility into their curriculum, even though a majority of them believe that it is an important function of higher education. One explanation may be that less than half of the faculty (46%) believe the institution places high priority on faculty and student engagement in the community and less than one third (31%) believe that institutional resources are sufficient enough to support faculty in such endeavors (Lindholm, et al., 2005).

Level of engagement in the form of service can take place both within the institution and in the community. It was reported in the 2004-2005 HERI Faculty Survey that 62% of faculty at
four-year institutions were personally engaged in at least some community or public service, and that 42% had community partners as collaborators. Table 3 shows how faculty engagement differs, depending on the type of four-year institution. Overall, more than half (58%) of all faculty reported being engaged in community or public service, and 47% having used scholarship to address local or community issues. While only 21.1% reported teaching a service-learning course, twice as many faculty members (44.0%) said that they collaborated with community representatives on research and teaching activities (Lindholm, et al., 2005). It is interesting to note that the survey does not differentiate between research and teaching activities with community representatives, thus supporting the idea that the two should be interrelated when viewing faculty workload and reward systems. At the same time, the discrepancy between the percentage of engaged faculty and the use of service-learning could mean that the community collaborators were involved with individual faculty research projects more so than classroom activities. It also may relate to faculty who do not label the involvement of community partners in their courses as "service-learning," but something else, such as "field work," which points to the need for a more common definition of service-learning.

Table 3: Engaging Scholarship and Public Service Practices of Faculty by Institutional Type

<table>
<thead>
<tr>
<th>Activities</th>
<th>All 4-Year</th>
<th>Universities</th>
<th>Four-Year Colleges</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>% Public</td>
<td>% Private</td>
</tr>
<tr>
<td>Used scholarship to address local community needs</td>
<td>47.4</td>
<td>45.9</td>
<td>40.3</td>
</tr>
<tr>
<td>in the past two years:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engaged in public service/professional consulting without pay</td>
<td>58.0</td>
<td>61.0</td>
<td>54.4</td>
</tr>
<tr>
<td>Collaborated with the local community in research/teaching</td>
<td>44.0</td>
<td>44.6</td>
<td>38.0</td>
</tr>
<tr>
<td>Advised student groups involved in service/volunteer work</td>
<td>41.9</td>
<td>39.6</td>
<td>37.4</td>
</tr>
<tr>
<td>Taught a service learning course</td>
<td>21.1</td>
<td>22.2</td>
<td>20.3</td>
</tr>
</tbody>
</table>

(Lindholm, et al., 2005, p. 33 & 34)
Since more women have entered the faculty ranks, gender differences in levels of community engagement can explain why some of these percentages are as high as they are. Female faculty reported higher levels of commitment to social responsibility and service, and were more likely to use their research to address community needs. A higher percentage of female faculty taught service-learning courses, included community service in their undergraduate courses, and believed that these activities were a good use of resources (Lindholm, et al., 2005). Service-learning as a demonstration of commitment to the community and a teaching tool to emphasize social responsibility may continue to increase in popularity as the shift in faculty composition includes more women in all ranks of academia and at all types of higher education institutions.

Benefits and Barriers to Service-Learning Use

Why are some faculty members willing to utilize new teaching strategies and others are not? From a faculty perspective, service-learning is a teaching and learning tool that connects the course content with real-world application and civic responsibility (Astin, et al., 2000; Banerjee & Hausafus, 2007; Krebs, 2008; Points of Light Foundation, 2004). It is based on the understanding that all participants, including the faculty, contribute to, and benefit from, the experience, as well as form a partnership for the duration of the experience.

Service-learning offers new opportunities for faculty scholarship, connections to the community, and students’ learning how to address social problems (Bass & Silverstein, 1996). According to Levine (1994), the primary reasons that faculty become involved in service-learning are either that they were asked, or that they know a highly respected colleague who was incorporating this pedagogy into the classroom. Other reasons include faculty having expressed an interest in connecting their personal, professional and civic roles (Birge, 2005; Bloomgarden
& O'Meara, 2007), and viewing service-learning as a means to fulfilling the academic mission of the institution (Hinck & Brandell, 2000). Mundy (2004) found that faculty who had a positive impression of service-learning were more likely to incorporate it into their courses than faculty who did not know what service-learning was or had a negative view about it. Regardless of how they become involved in service-learning, the important part is that faculty start to understand the theory behind the experience (Kendall, 1986). This is when the incorporation of service-learning into the curriculum could happen in a strategic manner, and work can begin to institutionalize it.

Zlotkowski (1995) argued that service learning must be viewed as a viable discipline-relevant pedagogy, rather than a means for just teaching students their civic responsibility. Most faculty agree that students should learn how to address societal issues, although they do not see it as part of their teaching obligation. To be successfully integrated into an institutional and academic culture, service-learning needs to be presented to faculty in terms of how it benefits them (Hinck & Brandell, 2000). Furco (2001) identified three strategies for advancing service-learning: linking service-learning to the research activities valued most, current academic goals and activities of the institution, and to the academic disciplines. Furco (2002a) also noted that faculty acceptance is often linked to the broader visibility of service-learning on campus. Institutionalization can take place at the programmatic, departmental, or divisional levels, as well as across the institution as a whole.

The main benefits to using service-learning are the chances to improve teaching methods, to find a renewed interest in teaching, to link teaching, research, and service in new ways, and to enhance student learning (Holland, 1997). Murray and Renaud (1995) noted that effective teaching techniques are integral in all academic disciplines and should include examples to
explain the theories of each discipline. Gappa, Austin and Trice (2007) believe that “when faculty have the opportunity to develop cutting-edge teaching skills, balance their personal and work lives, and participate in decisions about curriculum design, they will be better able to provide an enriched learning environment and to contribute in significant ways to their colleges and universities” (p. 143). Yuker (1984) wrote that faculty have different interests in teaching that are reflective in the type of institution where they work, in their teaching load, and in the number of hours per week they devote to instructional activities.

Cantor (1995) reported that certain groups of faculty value active and experiential learning opportunities that improve students’ critical thinking and problem-solving skills, promote self-direction, and involve students in the learning process. “When faculty adopt new teaching strategies, the focus is usually on the effects it has on students, but it can change the faculty as well” ("Service learning engages students, revitalizes faculty," 2004, p. 5). Banerjee and Hausafus (2007) confirmed this when they reported that student learning (58.8%) was more important than other service-learning outcomes, including creating university-community partnerships (39.8%) and increases in student understanding of social problems (38.9%).

By aligning research interests with a social issue being taught to students in a course, faculty can use service-learning to advance a research agenda (Furco, 2001). “Faculty beliefs about the efficacy, or even the possibility, of integration depended on individual and environmental factors, including the nature of their discipline, research method, course content, and community engagement activity … and knowledge of or imagination about how roles and activities might support one another” (Bloomgarden & O'Meara, 2007, p. 14).

The academics that have engaged in service-learning projects realize that, when the community is given the “responsibility for identifying service initiatives that meet its own needs
while complementing learning outcomes,” the campus-community partnership becomes a reality (Bucco & Busch, 1996, p. 234). Faculty have learned that their teaching and research can be enriched through campus-community partnerships. Some, like the service-learning pioneers, have laid the groundwork for their institutions to see the benefits and support the opportunity costs associated with such activities. Others have been willing to try service-learning programs at the encouragement of their institutions as presented in the form of faculty development, incentive or recognition initiatives.

Dicklitch (2005), in her study of political science faculty, found that faculty experienced more satisfaction in teaching when they used service-learning than when they taught a more traditional course. Service-learning is one option that recognizes the students’ inquiries about relevance of course content. Faculty enjoyed showing students how the theories and methods they are learning are beneficial, relevant, and useful.

To be successful, faculty must possess a certain level of knowledge about student-centered pedagogy, the service project, and the community agency to ensure that service-learning fits within the curriculum. They should ask questions about how to apply service-learning to academic courses, what the options are to integrate service-learning efforts into the teaching, research and service triad, and how this pedagogy can support their application for tenure and promotion. This can happen through the encouragement from department chairs and other faculty members, as well as instructional support through faculty development efforts and from professional associations that can highlight the important reasons for using service-learning (Banerjee & Hausafus, 2007).

Undergraduate and graduate student involvement in faculty research happens in all types of institutions, although the amount of time that students assist with research may vary by
academic discipline (Student learning and faculty research, 2007). Rothman and colleagues (1998) wrote that the integration of research and service should include "a community relationship, institutional support, and scholarly integrity" (p. 102). Bloomgarden and O’Meara (2007) emphasized the need for faculty to find opportunities for combining their teaching and scholarly roles to "help individuals and their department colleagues overcome the simplistic view that community-based projects cost more than benefit, or distract more than enhance, scholarly work" (p. 6).

Service-learning faculty tend to have support from their department chairs and deans, as well as strong community partners willing to offer projects that fit within the curriculum. In an ethnographic study of faculty who incorporate service-learning into their courses, Palmer noted that these common qualities can be found among faculty, regardless of their disciplines or levels of academic experience ("Service learning engages students, revitalizes faculty," 2004).

Encouragement from department chairs and other faculty within their academic departments to use service-learning was found to be beneficial (Abes, et al., 2002; Banerjee & Hausafus, 2007, p. 36; Hartley, Harkavy, & Benson, 2005).

One of the earlier research studies of Campus Compact members was done in 1996-1997 by Hinck and Brandell (2000). Several goals of the study included determining the extent of faculty involvement, the value placed on service-learning by faculty and campus administrators, and the resources provided for it. One of the outcomes of the survey was the demonstration of "a growing commitment by those in higher education to the idea that teaching and learning go beyond the life of the campus and spill over into the greater community" (p. 873). The study confirmed that faculty were the least likely group to value service-learning, but the most influential in terms of how student and college administrators perceived its value. Finally, the
authors were able to show the connection between the different internal stakeholders and how perceptions about the social environment can influence involvement in service-learning activities.

Linking service-learning to the reward structure was an important way for this pedagogy to receive increased support and involvement from faculty, and especially junior faculty (Hinck & Brandell, 2000; Levine, 1994), even though it may not be as important in implementing service-learning as some would expect (Abes, et al., 2002). Furco (2002a) noted that the willingness of faculty to participate in service-learning initiatives hinges on their perception that it is something that they are to be rewarded for using in the promotion and tenure process.

Faculty reported that the primary barriers to using service-learning included time, logistics, a lack of guidance on how to use service-learning, limited recognition in the reward structure, perception of the value of using community based pedagogies, current research projects, evidence of academic outcomes, and a lack of peer and institutional support (Abes, et al., 2002; Banerjee & Hausafus, 2007; Bloomgarden & O'Meara, 2007; Kenworthy-U'Ren, 2008). Faculty generally make research and publishing their top priority, and recognize the risks for incorporating innovative pedagogies, such as service-learning, into their teaching (Kolenko, Porter, Wheatley, & Colby, 1996).

Faculty resistance was cited as one of the largest barriers to the expansion of service-learning for various reasons (Kenworthy-U'Ren, 2008; Kolenko, et al., 1996). Faculty may not fully understand what service-learning is, or have little or no experience using it (Rothman, et al., 1998). There may be a lack of interest in, or ability to change, teaching styles from more traditional methods (Birge, 2005). Faculty may want to keep their autonomy over their courses
and not want students, community agencies, or those being served involved in how a course is structured (Dicklitch, 2005).

If the goal is to have service-learning integrated into an institutional culture, then higher education institutions should follow Boyer’s call for the scholarship of engagement. The academic leaders can develop initiatives that lead to a “complete and connected” campus where “complete” refers to “the integration of teaching, research, and service” and “connected” refers to “these activities being linked to the community” (Bringle, et al., 2000, p. 883). The reality is that service-learning may not be more mainstreamed within a college or university, even when the institutional leadership is attempting to encourage service-learning and other activities related to campus-community partnerships because a majority of faculty do not perceive there to be enough personal benefits to participating in service-learning activities.

Service-learning might not be supported by the academic department or by colleagues, which might discourage junior faculty and those in tenuous employment positions from opting to use it (Hartley, et al., 2005), even if the research shows that those with the least job security are using service-learning at a high rate (Antonio, et al., 2000). This situation may be more prevalent at research universities where research expectations take precedence over pursuing non-research activities, including student-centered pedagogies like service-learning (Furco, 2001), and where faculty involvement in undergraduate teaching has decreased (Zusman, 1999). Along with a lack of recognition through the faculty reward system (Kolenko, et al., 1996), these barriers might make it politically dangerous for faculty to use a time-intensive teaching method like service-learning (Butin, 2005). Assistant professors on a tenure track may be warned not to engage in non-traditional instructional techniques that could take time away from producing scholarly work. “Even when institutional rewards and incentives are in place for faculty to
participate in service-learning, faculty members agree to expend the time and energy to develop high-quality service-learning experiences for their students only when they were convinced that engaging in service-learning will not be viewed negatively by their peers or the campus administration" (Furco, 2001, p. 69).

It is generally understood that the time and logistics required to plan and implement a service-learning course is greater than for a traditional teaching method, such as lecturing (Dicklitch, 2005). Since service-learning requires more preparation time, the decision to include it in an academic course must be weighed against other service obligations that could take time away from research activities needed for tenure and promotion evaluations or service obligations to the institution. The potentially additional stress associated with a service-learning component in a course must be taken into account and evaluated in relation to the benefits a professor may receive from such an endeavor. The challenge for faculty who want to use service-learning is how to balance the additional time and energy required to manage a service-learning course above the traditional time commitment of course preparation without increasing stress levels.

To counter the view that using service-learning is in conflict with scholarly activities, faculty need to be encouraged to see how service-learning can support research agendas (Hinck & Brandell, 2000) without minimizing their commitment to community service (Bloomgarden & O’Meara, 2007; Schnaubelt & Statham, 2007). Faculty should expect administrative support to implement service-learning projects, especially the first time it is offered. Assistance can include finding the community agency or service site, as well as setting up and monitoring the students’ service work in the field.

Bloomgarden and O’Meara (2007) noted that the lack of integration of teaching, research and community involvement was a function of a series of factors. These included a narrow
definition of scholarship, whether or not teaching and research could be integrated, institutional values, faculty workload constraints, and limited resources devoted to developing departmental and individual commitments to community work that is integrated into the other faculty roles, responsibilities, and rewards.

While a small percentage of faculty are willing to make this shift, most would prefer to lend their expertise and share research results with the community in order to limit their interaction with the community (Nyden, 2003). As previously mentioned, it may also be a function of there being no common definition of service-learning or faculty using it without labeling it as such.

In the past 10 years, however, the increase in institutional support for service-learning, along with the growth of scholarly journals focusing on service-learning or accepting research articles about service-learning, has resulted in less faculty resistance and more faculty seeing how service-learning can yield rewards and recognition (Kenworthy-U'Ren, 2008). The paradigm shift, from faculty generating and disseminating knowledge about and for the community to one where the community is involved in setting the research agenda and being involved in knowledge creation, is often seen when service-learning is incorporated into teaching and research efforts (Clark, 1999).

**Institutions and Service-Learning**

A look at service-learning in higher education would not be complete unless the institution's role was discussed. Colleges and universities have an influence on their professors' beliefs, attitudes and work ethics (Rice & Austin, 1990). How faculty view their environment and their perception of the organizational culture can provide insight into their personal choices and institutional pressures. While the self-knowledge construct focuses on the individual,
Blackburn and Lawrence's (1995) social constructs looks at the relationship between the faculty and their environment, as well as the influences of the social network where they work. Here, environment is primarily the institution where the professors work, rather than an external environment that includes the community or academic discipline as a whole, although an argument can be made that the scope of their environment should include external factors.

Founded on a call to serve their communities, many colleges and universities today are now striving to incorporate a sense of civic responsibility into its mission, purpose and culture. Ostrander (2004) found that the ease, or challenge, of establishing institutional civic-engagement initiatives can depend on the mission statement's articulating civic responsibility goals linked to student learning and the level of faculty involvement in faculty governance and other forms of service to the institution. Institutions and their leadership seek ways for students and faculty to be engaged in the community, through learning and service activities, as a means for developing positive university-community relationships (Cantor, 1995). "Perhaps in response to intensifying calls for higher education to adapt to changing societal needs and expectations, we see a shift over the last dozen years in the faculty's perceptions of institutional priorities...Today, 38% of faculty perceive a strong institutional emphasis on community service involvement (up from 23% in 1989)" (Lindholm, et al., 2002, p. 13). Three years later, Lindholm and her colleagues (2005) found that more than 80% of faculty agreed that colleges should be addressing community issues and encourage students to be involved in community service activities. How this translates into action, in part, depends on whether faculty see themselves as facilitators of community service activities.

While most faculty members support the institutional goal to have a positive relationship with the community, many believe that this is the institution's responsibility, and not necessarily
part of their individual obligation. Holland (2005) noted that “too often, faculty assume that in a
campus-community partnership, the faculty role is to teach, the students’ role is to learn, and the
community partner’s role is to provide a laboratory or set of needs to address or explore” (p. 11).
This may be related to situations where the faculty culture might not match the institutional
culture, especially if a significant percentage of its membership have more of an external or
“cosmopolitan” approach to their professional network, as discussed by Gouldner (1958).
Another reason is that faculty may not want to include community partners in their work (Bacon,
2002; Gugerty & Swezey, 1996; Morton & Enos, 2002) and risk losing autonomy in how a
course is constructed.

An institution’s commitment to service can be seen in the mission statement and in the
involvement of its faculty (Holland, 1997). The mission statement is often the first place that
this commitment is found, and includes statements about preparing students to become future
leaders and active citizens (Astin, et al., 2006). To succeed in becoming more accepted and
widely used by faculty, service-learning needs to be tied to the mission and purpose of the
institution. When this happens, it becomes accepted within the institutional culture (Furco, 2001,
2002a). It should be linked to teaching and learning strategies and become a recognized and
accepted pedagogy, even if the extent to which it is used varies from campus to campus (Hartley,
et al., 2005). Preparing students for service is also found in the overall goals of academic
disciplines and in national educational policies (Kenworthy-U'Ren, 2008).

Having the goals and outcomes of service-learning in an institutional mission statement is
not enough for universal adoption of the pedagogy by all faculty. Institutionalizing service-
learning requires broad faculty support, as well as greater visibility of how it fits within an
academic course or program. Rothman, Anderson and Schaffer (1998) wrote that a key factor to
the success of institutional changes relate to whether service-learning initiatives have been incorporated into the mission statement and are understood by all internal stakeholders.

The faculty involvement in activities relating to community service, especially through academic efforts, is linked to the relationship that they have with their institution and the community within it (Antonio, et al., 2000; Blackburn & Lawrence, 1995). “Service-learning offers the promise of allowing higher education institutions to articulate their missions, to engage students more deeply in the learning process, to develop meaningful relationships with their host communities, and to educate men and women to take leadership roles in a changing world” (Birge, 2005, p. 203). Experiential learning programs, including service-learning, are examples of how academic affairs can respond to an institution’s call for greater external visibility and involvement. The challenge to this idea is that the institutional leadership usually needs to convince the faculty that this is in their best interest, too.

Recognition that the implementation of service-learning projects require additional resources and institutional commitment is also critical to counteract the faculty’s belief that service-learning is important overall, but not necessarily something they want to use (Abes, et al., 2002). “Most faculty today endorse the importance of maintaining a close relationship between colleges and the larger society… By and large, faculty also feel that there is a greater institutional emphasis on sustaining partnerships with surrounding communities than there are resources provided by their institutions to facilitate faculty involvement in community-based teaching and research” (Lindholm, et al., 2005, p. 24). Unless they see that service-learning can be central to their teaching obligations with the resources provided, faculty will continue to report that it is important to the students and the institution, but not relevant to the courses they teach (Zlotkowski, 1996). Institutional support for faculty innovation and alternative teaching
and research methods can lead to, or become a barrier to, the implementation and institutionalization of service-learning.

The type of institution can have an effect on how faculty respond to the call to participate in service-learning. A difference exists between colleges and universities in terms of their approach to teaching. Smart and Ethington (1995) noted that four-year colleges concentrated on knowledge acquisition and integration more than research universities where faculty tend to focus on research and their academic disciplines. “The primary mission of research universities typically is the pursuit and production of new knowledge in the form of traditional research projects and publications” (Rice & Austin, 1990, p. 34). To advance and institutionalize service-learning at research universities, faculty and academic leadership need to demonstrate how service-learning is linked to the research agendas and the academic disciplines (Furco, 2001).

Evidence of institutionalization of service-learning can be found in many places beyond the college or university’s mission statement. These include, but are not limited to, the senior administration’s leadership, an office of service-learning, faculty training and curriculum development efforts, faculty recognition and rewards, service learning scholarships for students, and awarding a fourth credit for a service-learning project to students. Oftentimes, the institution is encouraging the faculty to move in a certain direction. Campus Compact, for example, was formed by university and college presidents who wanted to advance service-learning and experiential education on their campuses and in higher education as a whole (Hinck & Brandell, 2000).

Even with these efforts, service-learning has only been partially folded into the institutional culture of American colleges and universities. “For service-learning to firmly take root in the academy, advocates must learn to identify both the structural and ideological (or
culttual) features of their own institutions if they wish to devise effective strategies for addressing them" (Hartley, et al., 2005, p. 206). Birge (2005) wrote that the dominant academic culture of research challenges the idea of using a more student-centered pedagogy and encourages faculty to attend to institutional obligations that do not permit the time to examine the teaching and learning methods they use.

For a service-learning program to be sustained and truly integrated into the institutional culture, it is critical to have a broader institutional comprehension of what service-learning is and how it can benefit the students, professors and institution as a whole. Institutional commitment to service-learning can include faculty development opportunities, faculty stipends, release time, and policies to recognize faculty efforts. It can also be found in the creation of, and ongoing support for, an office of service-learning, which is an important and visible sign that service-learning is valued on campus. A service-learning center, however, is not required for service-learning to take place in an academic setting, or to be a recognized part of the college or university. In fact, there are probably more faculty engaged in some form of service-learning than actually report using it, due to the variations in definition and interpretation of service-learning.

When a service-learning center does exist on campus, it is located either as part of a student affairs division or within an academic unit (e.g., a college or academic department). The advantage of having it in the student affairs division is that the students are encouraged to better integrate service into their entire college experience. Locating the office in academic affairs results in more faculty support and involvement, as well as a greater emphasis on the learning element and how service can support this. The preferred location is in an academic unit.
Inclusion of service learning in the division of academic affairs may influence faculty acceptance of service learning as a viable pedagogy, although there have been models where the office is located in the student affairs division with faculty taking on important advisory roles (Morton, 1996). Institutions should be aware that appointing a professor to serve as an administrator also means that this individual may not have as much time to do his or her own research, and therefore provide the resources to hire staff to support the service-learning faculty, students and community partners, as well as make sure there is ongoing public recognition for these efforts. “What is most important to remember is that faculty will be receptive to service-learning only if they perceive service-learning to be important to the academic mission of the university” (Hinck & Brandell, 2000, pp. 879-880). This actually may be more applicable for faculty who seek rewards and recognition from inside their college or university than for faculty who have more of an external focus for rewards and recognition (Gouldner, 1958).

Antonio, Astin and Cress (2000) noted that, for service-learning to become more prevalent in academic affairs, the institution may need to change its culture, including how the faculty are socialized into the internal environment of the college or university where they work. Hinck and Brandell (2000) wrote that an institutional commitment to community service in the curriculum is related to the level of focus placed on the three areas of the faculty tripartite of teaching, research and service. Institutional commitment to student engagement in the community and faculty involvement in service-learning are key to the sustainability and growth of this form of experiential education.

One outcome of an institutional commitment to service-learning is often the recognition that it can change the culture due to its integration of service and learning with the community’s involvement. As an example, the Indiana Campus Compact has developed a successful model
for encouraging and supporting faculty and service-learning in the state’s colleges and universities through its Faculty Fellows program. A hallmark of the program is the institutionalization of service-learning and support from many levels, ranging from the department chair to the provost. The program’s philosophy is that it is not enough to get individual faculty involved in service-learning. It also requires others to recognize and reward community engagement as scholarship (Bringle, et al., 2000). It is when the administrative and faculty leadership are involved that the institutional commitment to service-learning is present.

Hinck and Brandell (2000) defined five key elements to successful service-learning programs on college and university campuses. Service-learning programs must have strong presidential and administrative support and commitment that go beyond a mission statement and are linked to goals and measurable outcomes. There needs to be a common definition on campus of what service-learning is in order to be able to provide quality experiences and measure impacts. Faculty need to be convinced that service-learning is worth their time and attention, which can be accomplished by situating the resources and faculty development efforts within academic affairs and linking service-learning activities with faculty reward structures. An office of service-learning with appropriate staffing levels should be created, and a faculty member should be appointed as director to give the program credibility, visibility and importance. Finally, there needs to be public recognition for service-learning that validates the importance of the faculty’s success in using service-learning in their courses. This recognition must focus on the academic and pedagogical importance to faculty and students, in addition to the social and moral obligations being met through the service.

The relationship between the institution and the faculty with respect to service-learning needs to be strengthened and sustained if both are committed to student engagement in the
community through formal activities directly linked to student learning. Faculty need to find ways within their own institutional communities to foster acceptance and support for those who opt to bring service-learning into their teaching, research and service activities. Beyond the recommendation to have a service-learning office, an institution must also find ways to actively participate in the success of service-learning on campus and truly become the fourth stakeholder in the process on an ongoing basis.
CHAPTER III: RESEARCH DESIGN

As previously discussed, the main purpose of this study is to determine the likelihood that faculty are choosing to use service-learning within their academic courses, based on key factors relating to sociodemographic, academic and institutional characteristics, faculty workload issues, and the relationship between faculty and their institutions. By building upon the research that has been conducted in the past, both on faculty in general and on faculty and service-learning, this study is a step toward a more comprehensive profile of faculty who have selected service-learning as a pedagogical option in comparison to those who have not. With knowledge gained through this study, academic leaders can start to identify ways to increase service-learning efforts, if that is a goal of the institution or academic discipline, or have better insight into why such efforts are not being embraced as readily by certain groups of faculty. This study may also be able to provide answers regarding how to clarify perceived ambiguities in understanding faculty workload issues using service-learning as a basis for this analysis.

This chapter discusses the research questions and hypotheses, conceptual framework, the data sources and samples available for analysis, the research variables, and the methodological approach. It concludes with the limitations and suggestions for future research.

The Research Questions

What is the percentage of faculty members at four-year institutions of higher education who include and do not include a service-learning component in their academic credit-bearing courses? How do sociodemographic and academic characteristics, workload issues, and institutional factors, as perceived by faculty, predict the likelihood that faculty are use service-learning?
Hypothesis #1

The first hypothesis is that the faculty's use of service-learning in academic courses relates to sociodemographic, academic and institutional characteristics. More specifically, faculty members with the least status, and possibly in the most tenuous employment positions within the institution – women, minorities, and those who are non-tenured, either on a tenure-track or on a term appointment – are more likely to incorporate service-learning into their courses. This hypothesis posits that the findings from Antonio, Astin and Cress' (2000) study using the 1995-1996 HERI Faculty Survey is supported by the more current data.

The null hypothesis is that these sociodemographic, academic and institutional factors do not have any bearing on the faculty’s use of service-learning in their academic courses.

Subsidiary questions:¹

1. What are the sociodemographic, academic and institutional characteristics of the faculty who use and do not use service-learning in their academic courses?
2. Which combination of sociodemographic, academic and institutional characteristics has the strongest association with faculty who use and do not use service-learning in their courses?

Hypothesis #2

The second hypothesis is that the inclusion of service-learning in a course can be related to the faculty’s focus on teaching, research and service. More specifically, faculty members who use service-learning in academic courses are more likely to report an orientation toward teaching than toward research. This orientation or preference may not be directly associated with the research productivity required to change their academic status. A subset question includes whether or not teaching a course with a service-learning component is viewed as part of a

¹ This is based on the findings reported by Lindholm, Astin, Sax and Korn (2002).
teaching function, a research function, or a service function, when considering its place within the faculty workload tripartite. Zlotkowski (1995) wrote that it is important to consider the research and publishing potential of service-learning in conjunction with its teaching values in order for faculty to see its relevance to their work.

The null hypothesis is that the probability of a faculty member’s using service-learning in a course is not related to his or her focus on teaching, research or service.

Subsidiary questions:

1. What are the workflow and work preference characteristics of faculty who incorporate, or do not incorporate, service-learning into their courses?

2. Which combination of workflow and work preference factors has the strongest association with faculty’s using, or not using, service-learning in their courses?

**Hypothesis #3**

The third hypothesis is that faculty with a more “local” commitment to their institution and its internal academic community are more likely to incorporate service-learning into their courses than those who have a “cosmopolitan” focus, with their community of peers being formed externally through their academic discipline (Gouldner, 1958). This hypothesis is related to the institutional culture, commitment to addressing social issues and serving the community in which the faculty work, and the level of involvement they have in the institution’s academic community.

The null hypothesis is that the probability of a faculty member’s use of service-learning in an academic course is not related to the institutional culture or the level of involvement in institutional reform.
Subsidiary questions:

1. What are the personal and institutional commitment characteristics that focus on the academic and external communities of faculty who use and do not use service-learning?

2. Which combination of personal and institutional commitment characteristics that focus on the academic and external communities has the strongest association with faculty using and not using service-learning in their courses?

**Conceptual Framework**

The conceptual framework for this study combines the work of Blackburn and Lawrence (1995), as outlined in their book, *Faculty at Work: Motivation, Expectation, Satisfaction*, and Antonio, Astin and Cress (2000), as found in their article “Community Service in Higher Education: A Look at the Nation’s Faculty.” Appendix A compares these conceptual frameworks with the conceptual framework developed for this study, and lists the original variable codes selected from the two datasets.

To see how the two model conceptual frameworks were used to create the one for this study, it is important to understand first what each set of researchers included. Blackburn and Lawrence’s (1995) conceptual framework, called the “properties of the individual,” included four constructs: Sociodemographic, such as age, gender and race/ethnicity; Career, which includes rank, tenure, discipline, institutional type, career age, and professional accomplishments; Self-knowledge, which looks at the level of engagement in and personal attitudes and values toward different faculty roles; and Social Knowledge, which focuses on the individual’s view of his work environment (pp. 16-17). Within this framework, behaviors are defined as the various teaching, research and service activities faculty perform (p. 30).
The conceptual framework developed by Antonio, Astin and Cress (2000) focused on faculty attitudes and behaviors as they relate to community service when controlling for several sociodemographic, academic and institutional characteristics. This study also focuses on faculty behaviors and attitudes as they relate to how likely it is that faculty include service-learning in their courses. The conceptual framework in this study was designed based on the survey questions included in the two national datasets acquired for this study and the two conceptual framework models.

The most common way to analyze the faculty is to look at sociodemographic data; however, any significant study must go beyond just age and gender to consider academic and social characteristics as well as faculty beliefs and perceptions. Blackburn and Lawrence (1995) attempted to demonstrate the importance of studying more than the demographics of American faculty to include the value of knowing how and why faculty members behave the way they do. Antonio, Astin and Cress (2000) were interested in knowing what are the “intrinsic and extrinsic factors that may motivate faculty involvement in service-related activities” (p. 377). In both cases, the researchers built faculty profiles that started with the sociodemographic and academic characteristics and factored in the type of higher education institution in which the faculty worked. The attitudinal and perception factors used in this study are borrowed from Blackburn and Lawrence’s (1995) career, self-knowledge and social knowledge constructs and from Antonio, Astin and Cress’ (2000) personal commitment to community service, attitudinal/values measurements, student-centered pedagogy measurements, humanistic and status orientations, college and service opinions, and institutional commitment to service.
Who are the Faculty?

Faculty members tend to associate themselves with different types of academic groups, usually broadly defined by academic standing and discipline within a given type of institution. When asked to describe themselves, they may note that they are a junior or senior faculty member, which generally translates into being an assistant or full professor, or a biology or sociology professor, thus noting their academic discipline. Some work at large research universities, while others are employed at four-year colleges where undergraduate education and teaching are stressed. Understanding which faculty are most likely to incorporate service-learning into their courses needs to start with these types of characteristics that form the foundation of any analysis focusing on workload issues and the organizational culture.

Faculty profiles are usually based on sociodemographic and academic characteristics together. Sociodemographic characteristics are considered intrinsic factors that provide a foundation for measuring the differences and similarities between various faculty groups (Antonio, et al., 2000; Blackburn & Lawrence, 1995). Blackburn and Lawrence (1995) cautioned against using only sociodemographic variables to predict faculty workload activities, because academic factors may have a more significant impact, and when analyzed together these two factors can have some bearing on how faculty interact with, and react to, their environment. One of the sociodemographic characteristics being used in this study is gender, since the number of male and female faculty members has become more evenly distributed. The number of women faculty increased to the point where they represented more than a third (35.9%) of all full-time faculty and almost half (44.4%) of all junior faculty in 1998 (Schuster & Finkelstein, 2006, p. 51). Women represented 34.4% of all full-time faculty at universities and four-year
institutions in 2001 (Lindholm, et al., 2002, p. 21). This figure increased to 40.6% in 2005 and 41.8% in 2007 (NCES, 2009).

The other sociodemographic characteristic in this study is race/ethnicity. Schuster and Finkelstein (2006) reported in 1998 that 14.5% of all faculty had identified themselves as being part of a minority group, with almost one fifth (19.8%) of all new faculty declared minority status. The overall faculty figures have increased to 19.8% in 2003, 21.9% in 2005 and 23.2% in 2007. The percentage of minority faculty was highest at the lower ranks, with 26.2% of all assistant professors being minority in 2003, 28.3% in 2005 and 30.2% in 2007 (NCES, 2009).

The two academic characteristics included in the first hypothesis are academic status and academic discipline, as they best represent the academic factors that can predict the probability that similarities can be found among service-learning faculty within these groups. Academic status is being defined as “one’s position within the hierarchy of the professoriate,” using academic rank as the predictive variable to represent not only academic rank, but also indirectly tenure status, longevity and age. Traditionally, longevity and age can be inferred from a faculty member’s academic rank, given the relatively consistent amount of time needed to move through the tenure and promotion process from assistant professor to associate professor to professor. Variations in this timeline, however, exist due to other circumstances, such as moving to another institution, taking time off due to family obligations, or changing careers. Tenure can also be inferred through academic rank. As reported by West and Curtis (2006), it generally takes six to eight years to obtain tenure, which most often is at the rank of associate professor, and then another six to eight years to become a full professor. Academic rank is the only academic status variable in the professional measures subset of the personal characteristics construct that Antonio, Astin and Cress (2000) included in their study.
Academic discipline has consistently been used as a predictive variable due to differences between, and similarities among, the Arts and Humanities, Social Sciences, Science and Engineering, and the Professional, Business and Education disciplines in their promotion of service-learning. Based on the categories presented by Biglan (1973), the academic disciplines in this study were combined into the above-mentioned groups. The Professional, Business and Education disciplines were combined, because they represented the applied disciplines where faculty tended to collaborate more on teaching and research and also showed an appreciation for service activities (p. 209). Some disciplines traditionally include experiential educational elements, such as internships, practica and field work, as their pedagogical approaches are more applied in nature. It is not clear if these disciplines tend to encourage their faculty to use service-learning more than academic disciplines that have more of a theoretical approach to teaching and learning. Academic discipline, therefore, is important as a predictive indicator, since service-learning can be found in all areas of academic teaching and learning.

The final predictive variable is institutional type, an important indicator for understanding faculty roles and perceptions due to the environment in which they work. It is used to help determine the odds that faculty use service-learning in their courses because of the commonalities in institutional culture and priorities among universities and four-year institutions, or between public and private institutions. A university is defined as being in the doctoral research university category of the Carnegie classification, while a four-year institution includes all master’s level and bachelor’s level colleges and universities. Institutional type is included in Blackburn and Lawrence’s (1995) career construct, as it defines where faculty members work and correlates to the levels of productivity in different areas of the tripartite. The odds that faculty in different types of institutions have similar perceptions and workload patterns is one of
the reasons that researchers like Antonio, Astin and Cress (2000) use this variable as a controlling factor when building their faculty profiles.

Service-Learning and Faculty Workload Issues

The second hypothesis seeks to identify the probability that the use of service-learning can be related to key workload issues, such as preference for teaching or research in comparison to actual time spent, having a service career or intellectual career orientation, and how many hours were devoted to teaching, research and service. The activities of the faculty tripartite can be used to define the levels of engagement in, and personal attitudes and values toward, different faculty roles, priorities placed on teaching, research and service, and personal job satisfaction factors, which are found in the self-knowledge construct designed by Blackburn and Lawrence (1995). Workload measurements can also be used to provide insight into a faculty member’s personal attitudes, values and commitments, with respect to the importance of certain aspects of the faculty role. Discrepancies between preference for, and actual hours spent on, teaching and research activities may be explained further by the sociodemographic, academic and institutional variables found in the first hypothesis.

Antonio, Astin and Cress (2000) divided these factors into a series of composite variables measuring professional and attitudinal/values factors, personal commitments to community service, and student-centered pedagogy commitments. The professional measurement variables included in this study focus on the extent to which faculty have a teaching orientation and use a student-centered pedagogy, such as experiential learning. Even if the hours spent on these types of activities may show otherwise, this variable helps to differentiate faculty who report a primary focus on teaching or research. Variables from the attitudinal/values measurement compare
opportunities for research (i.e., research orientation) with opportunities for teaching and for influencing social change (i.e., teaching and service orientation).

How faculty report dividing their workload between teaching, research and service indicates their level of engagement and interest in these activities. Blackburn and Lawrence (1995) included these measurements within the self-knowledge construct to demonstrate levels of engagement in institutional and professional activities. Antonio, Astin and Cress (2000) included only one variable in their study, reporting hours spent each week on a specific group of workload activities, which was community/public service found in the personal commitment to community service composite.

This study includes additional related variables to provide a broader picture on how the faculty divide their time between scheduled teaching hours, research and other related scholarly activities, and community/public service. Other authors (DeAngelo, et al., 2009; Lindholm, et al., 2002; Lindholm, et al., 2005; Schuster & Finkelstein, 2006) included hours spent on scheduled teaching to analyze workload issues. Shuster and Finkelstein (2006) considered hours spent on different faculty activities as objective measurements for how the faculty allocate their time, using nine or more hours per week as a high teaching load and six hours or less per week as a low teaching load. DeAngelo, Hurtado, Pryor, Kelly, Santos and Korn (2009) reported that “the amount of time faculty dedicate to teaching, research and service reflects the priority levels that faculty assign to those professorate roles” (p. 8). It also reflects the institutional culture and priorities. They divided the high and low loads differently, with 13 hours or more per week and eight hours or less per week, respectively. In this study, due to the way that both HERI and FSSE group the hours per week spent on teaching and research, a high load is defined as nine or more hours per week and a low load is defined as eight hours or less per week. The hours per
week reported on community/public service, as a predictive variable found in the Antonio, Astin and Cress (2000) study, will be reported as whether or not faculty did any hours each week on this type of external service.

To further define the probability that service-learning can be related to faculty workload considerations, several questions from the FSSE survey have been included. Hours per week teaching undergraduate students is analyzed, since a majority of service-learning courses are at the undergraduate level. Other variables included in this study are the percentage of classroom time spent on lecturing and whether or not any type of experiential learning is included in the curriculum of the respondent’s selected course. Service-learning, as noted in the literature review, is one form of experiential learning. If faculty are using other forms of experiential education, they may be more inclined to use service-learning. The faculty member’s level of engagement can be further defined by their commitment to working with undergraduates on research, which demonstrates a link between teaching and research. The final variable looks at how the extent to which the faculty structure their selected courses to include ways to solve complex real-world problems, a form of problem-based and action-oriented research that is often associated in service-learning projects.

Service-Learning, Faculty, and the Institution

The third hypothesis focuses on the faculty members and their association with the institution where they work and with their peers in the larger academic community. Gouldner (1958) noted that the relationship between faculty and their institutions could be categorized into two groups. The “local” professors were actively engaged in institutional activities and sought rewards from within the institution. The “cosmopolitan” professors were more engaged in their academic discipline and sought rewards from outside their institutions. This “local versus
cosmopolitan" focus includes the impact of institutional culture and intellectual climate on faculty, as well as the differences or similarities between personal choices and institutional pressures relating to faculty workloads and their interpretation as to where service-learning can count toward the faculty tripartite. It is in this hypothesis that the odds that faculty use and do not use service-learning may become more apparent.

Once again, the two model conceptual frameworks provide a basis for understanding how the link between faculty and their institutions can predict the likelihood that service-learning can be included in the curriculum. Two of the components of Blackburn and Lawrence's (1995) "properties of the individual" can be applied here. First is the self-knowledge construct, which looks at the level of engagement in, and personal attitudes and values toward, different faculty roles. At the local level, faculty may demonstrate their loyalty to their institution by being integral members of institutional reform activities such as those related to the institutional mission or faculty roles and rewards. At a cosmopolitan level, faculty may want to involve students in their research and encourage them to present their findings at academic discipline conferences as a means for enhancing their involvement in the larger academic community.

Blackburn and Lawrence's (1995) social knowledge can explain the faculty member's view of the work environment and institutional culture, which have been formed from "experiences with colleagues, administrators, community decisions, faculty meetings, institutional rules and norms, and professional association practices" (p. 99). For example, if personal beliefs about preparing students to become responsible citizens and address social issues are in concert with those of the institution's, then the faculty may be more inclined to include service-learning in the curriculum. If faculty believe that an important focus of educating college students is something other than teaching them to embrace their role in society,
or that the institution’s commitment to a civil society is worthwhile but does not apply specifically to the faculty member’s work, then it is less likely that service-learning is used. As the academic advisor, the faculty member’s influence on undergraduates to participate in research or community service as part of their overall educational experience could also demonstrate his or her views of the academic and external work environments.

How the faculty view the institutional culture in which they work can positively or negatively affect their pedagogical choices. As Blackburn and Lawrence (1995) noted, “The devotion of energy to creating new courses and learning new pedagogical techniques dampens when one sees that necessary resources are hard to come by and senior faculty believe such efforts have no value” (p. 100). Antonio, Astin and Cress (2000) considered the institutional culture and priorities when developing their conceptual framework, and included an element of this in four of their composite variables, which are outlined in Appendix A. These show the range of faculty attitudes, beliefs and perceptions relating to experiences, both within their place of work and externally in the larger community. The variables selected for this study represent the different components of the conceptual framework to show where patterns may appear to predict the likelihood that faculty are using service-learning in their course, especially when their academic rank and gender, as well as institutional type, are taken into consideration. It is not only what faculty do, as seen in the second hypothesis, but also how associations can be made when considering the relationship with peers and the institution that may shape these beliefs and actions.

Overall, the relationship between service-learning, the faculty and their institution should provide further insight into the extent to which faculty would likely include service-learning in their courses. Institutional culture and priorities are important to consider in this study, because
they help to determine the probability that faculty will join their colleagues in providing students with both the academic learning and community service goals within the courses they teach, since many initiatives to increase service-learning stem from the academic and administrative leadership within an institution.

**Data Sources and Samples**

Two national faculty survey datasets were obtained for this study in order to compare the users and non-users of service-learning, based on a series of independent variables using a logistic regression model for the data analysis. The two datasets are the 2003 Faculty Survey of Student Engagement (FSSE) from the Center for Postsecondary Research at Indiana University Bloomington and the 2001 HERI Faculty Survey from the Higher Education Research Institute (HERI) at University of California, Los Angeles. Both surveys were designed to collect from faculty, at all types of institutions of higher education, information about their sociodemographic and academic characteristics, their work, and their attitudes and perceptions regarding their work and their institutions. This dissertation is the first time these two national datasets were being used simultaneously to research the faculty who have used service-learning in comparison to those who have not.

The value of the HERI dataset is that it provides the broader perspective on the faculty’s use of service-learning in relation to the predictive variables. The value of the FSSE dataset is that the respondents have selected one course of importance to focus on when answering the survey, which gives stronger insight into faculty beliefs, values, and pedagogical preferences when responding to the survey. The perspectives provided through these two datasets serve as a basis for analyzing the similarities and differences in results when they are used to answer each research question. It is expected that some research and subsidiary questions are best answered
by either the FSSE data or the HERI data. When both datasets can answer the same question, the results can be matched and compared with differences being explained with the support of the literature review. The two datasets were not merged together.

The HERI Dataset

The 2001 HERI Faculty Survey, a tri-annual survey, focused "heavily on issues such as how faculty members spend their time, how they interact with their students, their preferred methods of teaching and examining students, their perceptions of institutional climate, and their primary sources of stress and satisfaction" (Lindholm, et al., 2002, p. 3). Antonio, Astin and Cress (2000) used the 1995-96 HERI Faculty Survey to answer similar questions pertaining to faculty who use service-learning in their courses, and some parallels from their research are included in this study.²

Of the colleges and universities that were invited to participate in the 2001 HERI Faculty Survey, 379 agreed to administer the survey to their faculty. Additional faculty at 37 institutions were directly contacted by HERI to compensate for an imbalance in institutional type. HERI received a 41% response rate from all institutions surveyed (Lindholm, et al., 2002, pp. 99-100). HERI required that at least 35% of all full-time faculty at colleges, and at least 25% at universities, completed the survey in order for these institutions to be included in the normative sample created. For the supplemental sample, colleges needed a 30% response rate and universities needed a 20% response rate. Out of a possible 416 institutions, 358 (86%) met the faculty participation criteria and were included in the normative sample (Lindholm, et al., 2002).

The HERI dataset was then "weighted to provide a normative profile of the American faculty population for use by individuals engaged in policy analysis, campus administration, and

² Several researchers have said that Antonio, Astin and Cress did a follow-up study using the 2001 HERI Faculty Survey; however, attempts to find the results of this study have led back to this article published in 2000.
educational research" and was stratified into 12 different institutional groupings (Lindholm, et al., 2002, p. 3).

For this study, HERI provided 29,966 records. This represented all the respondents from four-year institutions, and not two-year institutions, in order to provide a basis for comparisons with the FSSE data, which only collected data on faculty at four-year institutions. The participating institutions were categorized as universities and four-year colleges. According to DeAngelo (personal communication, February 3, 2010), a university was defined as “any institution that offered doctoral degrees in at least five different disciplines,” and four-year colleges included all other colleges and universities. The IPEDS rule, originally set by the U.S. Department of Education, established this classification system. In comparing the list of participating colleges and universities to the Carnegie classification system, it was determined that those in the university group were more closely aligned with the doctoral research universities, and the institutions in the four-year college group were generally associated with the master’s and bachelor’s level categories found in the Carnegie classification system.

Out of a possible 335 variables in the HERI Faculty Survey, 20 variables (2001-2002 HERI Faculty Survey Code Book, 2001) are being used in this study. Individual and institutional identifiers, as well as questions that focused on the students, were among the variables not used. Appendix B contains a list of these variables for this study.

The HERI 2001 Faculty Survey dataset was made into two parallel datasets, one for each dependent variable. The first dataset, which analyzes whether or not the respondent taught a service-learning course in the last two years (TCHACT06B), contains 20,187 records. The second dataset, which focuses on whether or not the respondent used community-service as part
of coursework (INSUSE15B), contains 22,171 records. Table 4 shows the breakdown of positive and negative responses to these questions.

Table 4: Final HERI Datasets

<table>
<thead>
<tr>
<th>Dependent Variable #1: Taught a service-learning course</th>
<th>Dependent Variable #2: Community service as part of coursework</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responses %</td>
<td>Responses %</td>
</tr>
<tr>
<td>Yes 4,275 21.2</td>
<td>5,684 25.6</td>
</tr>
<tr>
<td>No 15,912 78.8</td>
<td>16,487 74.4</td>
</tr>
</tbody>
</table>

The FSSE Dataset

Kuh, Nelson Laird, and Umbach (2004) developed the Faculty Survey of Student Engagement (FSSE) to provide a new dimension for understanding student engagement, which is assessed through the annual National Survey of Student Engagement (NSSE). The FSSE survey aims to show "the extent to which faculty expectations and priorities shape student performance" (p. 2). FSSE was designed to bring additional insight into the NSSE data by creating a vehicle for comparing student responses with that of their faculty ("Converting data into action," 2003). Key elements of FSSE are its focus on the level of importance faculty place on various areas of teaching and learning and its data on faculty workload issues relating to teaching, research and service ("About FSSE," 2008), as well as the sociodemographic and academic characteristics collected. The researchers found that "certain types of faculty members are more likely than others to use effective educational practices" often associated with collaborative and active teaching and learning activities (Kuh, et al., 2004, p. 5).

FSSE provided a random one fifth of the responses for the 2003 dataset, which constituted 2,890 records of data, for this study. According to the FSSE project manager, Dr. Tom Nelson Laird (personal communication, April 24, 2009), "FSSE does not employ or provide
weights. We do not collect enough information in the population files to do so.” The FSSE data were used with permission from the Indiana University Center for Postsecondary Research.

Within the dataset, 14 out of a possible list of 98 variables (FSSE 2003 Codebook, 2003) are being used in this study. It should be noted that institutional type in the FSSE dataset was based on the Carnegie classification system. Variables not included are individual and institutional identifiers, as well as questions that focused on the students. See Appendix B for a list of the variables included in this study.

The FSSE dataset includes 2,423 records that are used for this research. Within this dataset, 838 (34.6%) positively responded to the question about including a community-based project in an academic course. Table 5 shows the breakdown in positive and negative responses to these questions.

<table>
<thead>
<tr>
<th>Table 5: Final FSSE Dataset</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participate in a community-based project as part of selected course</td>
</tr>
<tr>
<td>Responses</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
</tbody>
</table>

Research Variables

The research variables for this study are divided into four groups: dependent variables, independent variables for Hypothesis #1, independent variables for Hypothesis #2, and independent variables for Hypothesis #3.

Dependent Variables

Three questions are being used as dependent variables in this study, one from FSSE and two from HERI. The FSSE question and one of the two HERI questions have the four response options collapsed into two, so that all three dependent variables are dichotomous and indicate
whether a faculty member used service-learning in an academic course. The collapsing of these options into a “yes/no” categorical variable is being done because two of the three positive responses were statistically insignificant.

The first HERI question that serves as a dependent variable is taken from Question 13 that asks, “During the past two years, have you engaged in any of the following activities?” One of the 11 options within this question is “Taught a service-learning course” (THCACT06). The responses options are “yes” and “no” (2001-2002 HERI Faculty Survey Code Book, 2001, p. 3). The second dependent variable is from Question 33 that asks, “In how many of the undergraduate courses that you teach do you use each of the following?” One of the 15 instructional techniques, or methods, is “Community service as part of coursework” (INSUSE15). While there are four options for answering this question: none, some, most and all (2001-2002 HERI Faculty Survey Code Book, 2001, p. 9), the three positive responses are combined to create a dichotomous categorical variable response of “yes.”

FSSE asks faculty to select one course in which to answer a series of questions. Question 6 asks, “How often do students in your selected course section engage in the following?” One of the seven components of this question is “6c: Participate in a community-based project as part of your course” (FCOMMPRO), and serves as a dependent variable in this study (FSSE 2003 Codebook, 2003). The response options are never, sometimes, often, and very often. The three positive responses are combined to create a dichotomous categorical variable response of “yes.”

It is interesting to note that the two HERI questions being used in this study can be interpreted differently by faculty who incorporate service-learning into their courses. The FSSE question could be compared more closely to one of HERI questions than the other, as discovered at a presentation that this researcher gave at the “Thought to Action: Engaging College,
Community and Students through Service-Learning Partnerships” Conference at Buffalo State/SUNY on October 25, 2008. While comparing the preliminary results of the two HERI questions and the FSSE question, several professors in the audience noted that teaching a service-learning course (HERI Question 13) can mean something different from including a community service component in an existing course (HERI Question 33 and FSSE Question 6c). Some service-learning faculty view this first question as a course where the specific purpose is service-learning. A one-credit service-learning course, for example, could be linked to a regular lecture course, adding the service-learning component to the curriculum, or it could be taught separately. This would result in the faculty member’s saying “yes” to whether or not he or she taught a service-learning course within the last two years. If, on the other hand, a faculty member incorporated a service-learning (or community service) component into an existing course, then the answer to whether or not he or she taught a service-learning course could be “no,” even if the answer to the other two dependent variables is “yes.” This discrepancy, as defined by a specific group of faculty attending a workshop, is indicative of a lack of a common definition for service-learning, as discussed in the literature review. Other faculty might not differentiate between these two HERI questions. It is, therefore, important to analyze the results of all three questions to attempt to develop a more complete understanding of who are the service-learning faculty. The implication of comparing two datasets, as well as two different types of dependent variables, is that they demonstrate the multiple ways that faculty define what a service-learning course is, and thus could present a more comprehensive profile of who the service-learning faculty are. This becomes an important indicator, since it is ultimately the faculty member who decides whether to teach a service-learning course or to include a service-learning component in an existing course.
Independent Variables

The independent variables are categorized by the three hypotheses, and are based on a combination of the “properties of the individual” conceptual model presented by Blackburn and Lawrence (1995) and the conceptual framework proposed by Antonio, Astin and Cress (2000), as seen in Appendix A. The complete list of independent variables is found in Appendix B, and the Hypothesis Map can be found in Appendix C.

Hypothesis #1 focuses on the sociodemographic, academic and institutional characteristics of the faculty members who responded to the two surveys. The sociodemographic characteristics are gender and race/ethnicity. The academic characteristics are academic status and academic discipline. Institutional type is grouped in two ways: as university or four-year institutions, and as private and public institutions. Race/ethnicity is being included in this study, even though only the other three predictive variables were included in a similar study conducted by Abes, Jackson and Jones (2002). Academic status is defined as “one’s position within the hierarchy of the professoriate,” using academic rank as the predictive variable to also represent tenure status and length of time as a full-time instructor. The categories for academic rank in both the HERI and FSSE datasets have been combined into the same groupings for comparison purposes: professor, associate professor, and assistant professor, since these are the most commonly defined positions within a rank and tenure system. The “Other” category, which includes lecturer, instructor and other term positions, is included in the datasets since they may contribute to the results of the first hypothesis.

The academic discipline categories in both the FSSE and HERI datasets were collapsed using the broad discipline categories found in the FSSE survey into six grouping: Arts and
Humanities; Science and Engineering; Professional, Business and Education; Social Science; and Other. These groups are similar to the ones found in Biglan's (1973) research.

The type of institution where a faculty member works can affect the way in which individual priorities and attitudes are formed. Institutional type in both datasets has been divided between (a) universities and four-year institutions and (b) private and public institutions. This method standardizes the different classification systems used by FSSE and HERI into comparable categories. As demonstrated through the HERI reports (Antonio, et al., 2000; Lindholm, et al., 2002; Lindholm, et al., 2005), and because it is important not to make general assumptions about all faculty at four-year institutions given the variance in sociodemographic and academic characteristics, the second and third hypotheses in this study look at additional predictive variables.

Hypothesis #2 focuses on service-learning's place within the faculty tripartite of teaching, research and service, as well as a faculty member's preference for teaching or research. How faculty members actually allocate their time to the various areas of the tripartite may or may not be in harmony with their preference for teaching or research. This comparison helps to explain both their levels of engagement in, and their attitudes and values toward, this type of pedagogy. Antonio, Astin and Cress (2000) differentiated the preferences in a series of composite variables, such as the intellectual career orientation with more of a research focus, the service career orientation, professional measurements for teaching, student-centered pedagogy or experiential education, and a personal commitment to community service. Specific variables found in the composite variables have been selected to represent each group. In addition, the HERI dataset includes a variable that directly asks respondents for their preference for teaching and research. The results of these variables can be compared to the faculty workload variables, which report
hours per week on specific activities, to show if there are any similarities or differences between how faculty would like to allocate their work with how they actually report time spent on teaching, research and service.

The FSSE dataset has several variables being used to analyze the second hypothesis, as they are more specific than those found in the HERI dataset. For example, where HERI asks about hours teaching each week in general, FSSE focuses more specifically on undergraduate students, although it does allow respondents to select an “other” category for course level, but does not define this category. This is important, since others (Astin, et al., 2000; Butin, 2005; Stanton, 1990; Warchal & Ruiz, 2004) have noted that service-learning tends to be primarily used at the undergraduate level.

Antonio, Astin and Cress (2000) considered the goal of preparing students for responsible citizenship as potentially an important indicator of a faculty member who is committed to service-learning. Including pedagogical methods of teaching students how to solve real-world problems is a hallmark of service-learning. This is why the FSSE and HERI datasets have questions that focus on these areas. One representative question from each dataset was included in this study to provide insight into faculty motivations for using or not using service-learning.

As previously mentioned, a series of predictor variables focusing on how faculty allocate their work efforts are being used to determine if there are any similarities or differences between service-learning faculty who include this time-intensive pedagogy and non-service-learning faculty. Both HERI and FSSE surveys used the same scale for the number of hours spent on various teaching, research and service activities in groups of four hours (e.g., 1-4 hours per week). These groupings have been combined to report faculty workload for teaching and research as high (nine or more hours) or low (eight hours or less), based on the scale that other
researchers have used (Antonio, et al., 2000; Schuster & Finkelstein, 2006). It should be noted that the variable selected to represent external service is included because Antonio, Astin and Cress (2000) found it to be important. The two FSSE variables included that pertain to the hours a faculty member has spent in a typical 7-day week are teaching undergraduate students in class and working with undergraduates on research. The latter is included since it could be part of the research component of the faculty tripartite and because of the applied research potential relating to a service-learning experience.

Hypothesis #3 focuses on the “local versus cosmopolitan” concept that pertains to how involved faculty members are in their institution, as well as their attitudes and perceptions of the work environment. This, combined with the impact of institutional culture on faculty, contributes to determining the odds that faculty are using service-learning. For example, it is expected that faculty who are involved in institutional reform and governance efforts would have more of a local focus toward their environment (Gouldner, 1958), and may also be more likely involved in service-learning activities.

To understand the environment in which a faculty member works, it is important to consider the values placed by the individual and by the institution, based on the faculty’s perception, on certain educational goals for undergraduate students, institutional priorities and culture, and the institutional commitment to the community and addressing social issues. It should be noted that addressing social issues could be handled through applied research conducted by both faculty and students, in addition to teaching and service activities. Antonio, Astin and Cress (2000) included these types of variables in five composite variables, as noted in Appendix A.
Overall, the faculty’s perception of the institutional culture can provide valuable insight into the likelihood that they use service-learning in their courses. This includes not only what role the institution should have in interacting with society and promoting service-learning activities, but also more internally as demonstrated by how important it is for faculty members to believe teaching is valued by their peers in their academic department.

**Methods of Analysis/Statistical Model**

The data from the two national datasets are first analyzed using descriptive statistics to identify patterns and trends among and within independent variables to determine which may be the best options to use in a logistic regression where the dependent variables are categorical (Foster, et al., 2006; Nolan & Heinzen, 2008). The logistic regression analysis then determines if such patterns and trends are statistically significant to determine the odds that faculty are incorporating service-learning into their courses.

More specifically, the variance inflation factor (VIF) test is used to determine the extent to which the standard error of the variance had increased because of collinearity. It also shows the percentage of variance that is shared between two or more variables that could then be used to predict the accuracy of group membership (Kachigan, 1982, p. 139). The closer the VIF value is to 1.0, the less collinearity there would be (Foster, et al., 2006).

Different researchers have set a threshold for the VIF to be used to show how closely multiple independent variables are to each other. For example, Miles and Shevlin (2001) noted that the VIF should be below 4.0 for collinearity not to be considered a significant problem, while Foster, Barkus and Yavorsky (2006) used a value of 2.0 and Allison (1999) uses a value of 2.50 to determine if independent variables were highly correlated. The issue with finding high collinearity is that it indicates how much larger the standard error is as a result of a set of
variables being highly correlated, which results in correlations not being as statistically significant or redundant variables being included that could affect the conclusions drawn from the analysis (Allison, 1999). In this study, a value of 2.0 or higher in the VIF test is considered high collinearity. When there is high collinearity, the independent variables that are considered redundant were dropped from the study (Foster, et al., 2006; Kahane, 2001; Miles & Shevlin, 2001).

Logistic regression is the analytical tool being used to predict group membership when the dependent variables are dichotomous. It focuses on whether a relationship exists. This is important for predicting whether or not faculty act in a certain way, and in this case include service-learning in their courses, and what their comparative value is in determining the probability that the dependent variables are positive (Foster, et al., 2006). This study uses a logistic regression method to determine how the "odds" that a faculty member engages in service-learning activities are positively or negatively related to various predictor variables found in the conceptual framework developed for this study, using both the Blackburn and Lawrence (1995) and the Antonio, Astin and Cress (2000) frameworks as models. The results of the logistic regression can be used to predict the odds that the independent variables selected for this study predict the outcome for other datasets of faculty (Foster, et al., 2006).

Both the HERI and FSSE datasets have primary service-learning questions that are or have been transformed into dichotomous variables needed for a logistic regression model. Since neither dataset had all the variables set up for a logistic regression using dummy variables, those that were not dichotomous variables were recoded to become dummy variables so that one group could be the reference group (Miles & Shevlin, 2001). This was accomplished for all but two variables, academic status and academic discipline. For these, a series of dummy variables were
created with one of the original options becoming the reference group. The reference group for academic status is the Assistant Professor. The reference group for the academic discipline is the category of Arts and Humanities.

To prepare the datasets for analysis, some cases were dropped to reduce the skew that could result in their inclusion. Missing cases for the one FSSE and two HERI dependent variables were dropped from this study, in order to focus on those faculty members that responded to these questions. Based on a frequency distribution, it was determined that 3,966 respondents did not answer the question, “Did you teach a service-learning course in the last two years?” (TCHACT06B), and 960 respondents did not answer the question, “How many undergraduate courses did you teach using community-service as part of coursework?” (INSUSE15B) in the HERI dataset. With only 267 cases where neither dependent variable was answered, a second parallel dataset was created so that each dependent variable could be analyzed individually. The missing cases from each dependent variable were then omitted from their respective datasets.

The frequency distribution for the dependent variable in the FSSE dataset, “How often do the students in your selected course participate in community-based project as part of their coursework?” (FCOMMPRO2) identified 35 respondents that did not answer this question. These cases were deleted from the dataset.

Cases that did not make sense or were missing critical data in specific independent variables were dropped from their datasets. Even though the timeframes for the two dependent variables, and for hours per week teaching, are not the same, the fact that the definition of service-learning requires the professor to be teaching an academic course in order to include service-learning justifies eliminating any cases where hours per week are reported as none. For
example, 160 respondents in the HERI dataset reported zero hours of scheduled teaching per week (HRSPWK01B), and have been dropped from the study. The 1,541 missing cases in the hours per week of scheduled teaching variable in the HERI dataset have also been dropped for the same above-mentioned reasons. In addition, if the respondents did not answer this question, then it was difficult to verify their responses to either of the dependent variables.

The 58 cases in the FSSE dataset that reported zero hours of teaching undergraduates (UGTEACH) were dropped, since the dependent variable asked for whether or not a community-service project was included in the respondent’s selected course. It is possible that the respondent selected a graduate course to answer the survey, and thus could result in a non-relevant answer to the question about the number of hours teaching undergraduates. While it might have been feasible to see if the respondent’s selected course was a graduate-level course, the question that asked for the course level (CRSLEVEL) included a category called “other,” which asked the respondent to describe. The descriptions, which could have been graduate, non-credit, or another option, were not included in the database obtained for this study; therefore, not making it possible to identify what type of course was selected for the FSSE survey.

At the same time, 144 cases that did not answer the question about number of hours per week teaching undergraduate students (UGTEACH) were omitted because they did not have the necessary information to verify whether the respondent taught a service-learning course (FCOMMPRO2). Even if they answered positively to the dependent variables, the fact that they did not report any teaching hours would negate their ability to incorporate service-learning into their courses.

On the other end of the spectrum, 71 respondents in the HERI dataset reported 35 or more hours of scheduled teaching per week and 25 respondents in the FSSE dataset reported
more than 30 hours of teaching undergraduate students per week. The reporting of these extensive teaching hours could either include classes taught by teaching assistants that the faculty member supervised or be an error in reporting. These outliers have also been eliminated from the datasets.

Limitations

There are several limitations within the HERI dataset. First, the two questions being used as dependent variables are the product of a lack of a common definition of service-learning. The first is Question 13 that asks if the respondent had taught a service-learning course within the last two years, and the second is Question 33 that asks if incorporating a community service component into a course was an instructional method used by the respondent. While both describe service-learning courses, faculty can interpret their meanings very differently, which may result in respondents answering "no" to one and "yes" to the other. Both questions are being used as dependent variables in this study in an attempt to capture both sets of faculty that use service-learning into their academic courses.

Another limitation within the HERI dataset is that within Question 33, which asks in how many courses does the faculty member use a series of instructional techniques/methods, the variable for "extensive lecturing" was not requested for this study. If it had been included, it could have been used as a comparison to a similar question in the FSSE dataset.

There is also a limitation in the fact that the phrase "community service" is being used interchangeably with service-learning in the dependent variable. Granted, having a community service element in an academic course is part of the definition of service-learning, however the use of this phrase may be interpreted differently than including service-learning in a course. For example, some faculty may have included a community service project in a course without
necessarily including the community agency partner in the course that is required for the reciprocal relationship to develop, or incorporating the reflection component required for students to fully understand the experience and its link to the curriculum and the real world.

Having two variations on how a service-learning course is defined in the HERI dataset, as well as data from two different sources being analyzed simultaneously, may have an impact on the results of this study in that there are multiple ways to interpret the data. A definitive profile of service-learning faculty and non-service-learning faculty may not be as apparent as originally expected. The value of analyzing multiple datasets simultaneously is that it recognizes the different combination of factors that could predict the odds that different groups of faculty would use service-learning.

Efforts to institutionalize service-learning require faculty to be willing to use this student-centered pedagogy more than one time, with the goal of having them also conduct research and publish their findings and mentor others who have expressed an interest in trying it. If either dataset had included questions about how often faculty used service-learning in their academic courses or if they planned to use it again, then there would have been a chance to analyze the long-term impact of and potential for institutionalizing service-learning.

The fact that there are additional elements of the two model conceptual frameworks that could not be included in this study is another limitation. While it would be interesting to research how the “properties of the environment” conceptual framework that Blackburn and Lawrence (1995) designed could be applied to the hypotheses in this study, the two national datasets acquired did not contain the necessary questions to adequately address this area. There were also two blocks designed by Antonio, Astin and Cress (2000) that were not included in this study: faculty socialization and institutional characteristics. Faculty socialization, which was
based on the 20 academic disciplines of the highest degree earned, is not a variable that is easily accessible to academic leaders to determine the likelihood that a professor includes service-learning in a course. It is also not expected to be a variable that can be controlled when trying to determine how to explain why service-learning is or is not prevalent on campus. Institutional characteristics (e.g., size, percentage of women faculty, selectivity, etc.) were not included in this study, because the datasets obtained from HERI and FSSE had no institutional or individual identifiers needed for a comparative analysis.

A final limitation to this study is the fact that only the HERI dataset was weighed to create a national norm for faculty at American colleges and universities, and the FSSE dataset was not weighed. The implications are that the only HERI dataset is more representative of the faculty population as a whole. Any comparisons between the two datasets need to be reviewed with this information in mind.
CHAPTER IV: DATA ANALYSIS AND RESULTS

As noted in Chapter III, the research question for this study focuses on the factors associated with faculty at four-year institutions of higher education who include and do not include, a service-learning component in their academic credit-bearing courses, as well as the expected odds that sociodemographic and academic characteristics, workload issues, institutional influences, and personal views can be associated with the use of service-learning. The results presented in this chapter are divided into three sections, one for each dataset obtained for this study. Each section includes the results of the descriptive statistics for all variables included in the study using a cross-tabular frequency distribution. This is followed by the results of the logistic regression analysis of those variables that are significantly related to any of the three dependent variables. With three dependent variables, two in the HERI dataset and one in the FSSE dataset, the analysis of each hypothesis could result in one to three possible interpretations. A summary of key findings and a comparison of the three datasets conclude this chapter and provide insight into which factors have stronger relationships with the use of service-learning.

Overview of the Three Datasets

Three datasets were used in this research. They represent different levels of commitment to service-learning, as demonstrated by the way the dependent variables are phrased in the survey instruments. These variations point to different ways that faculty interpret what is, and is not, service-learning, which is consistent with the lack of a common definition for service-learning. The first two datasets were created from the 2001-2002 HERI Faculty Survey. Each contained one of the two dependent variables found within the survey. The first HERI dataset (HERI DV1) focused on whether or not a professor taught a service-learning course in the last two years, and therefore identified those who may have tried this pedagogy but not necessarily
made a commitment to using it more than once. The second HERI dataset (HERI DV2) looked at whether or not professors included community service as an instructional technique or method in any of the courses, which shows that there is a level of understanding that service-learning is a recognized pedagogy, as well as a willingness to talk about their experience with others. The dependent variable did not, however, note how often service-learning was included in these courses.

The third dataset was obtained from the 2003 FSSE Survey (FSSE DV3), where the respondents selected one course in which to answer the survey questions, which implies that there is a certain level of importance and interest associated with the selected course that they would want to share with their colleagues. The dependent variable in this dataset looked at whether or not the professor has included community service in the selected course. When faculty answered positively to this survey question, it could be a sign that they had made a commitment to using service-learning and reporting about the experience.

As a baseline of analysis, Table 6 shows the frequency distribution of the three dependent variables, with the percentage of faculty who used service-learning increasing as their level of commitment to this pedagogy becomes more apparent. The FSSE dataset yielded the highest percentage (34.6%) of faculty stating that they used service-learning, followed by the second HERI dataset (25.6%). The first HERI dataset showed the lowest level of involvement with only 21.2% of faculty reporting that they had used service-learning in the last two years. The range of responses could be attributed to how professors interpret the questions, as noted in the literature review, how they were defining service-learning, and how committed they were to using this instructional method. The greater the commitment to service-learning, as demonstrated in the way that it was defined in the dependent variable, the more likely faculty reported that they used
service-learning. If professors found value in using this form of pedagogy, it is expected that more would want to share their experience with their peers. The interest in discussing their use of service-learning may be connected to efforts at colleges and universities, and through the academic disciplines and professional journals to have faculty promote service-learning to other faculty.

Table 6: Results of the three dependent variables

<table>
<thead>
<tr>
<th>HERI DV1</th>
<th>HERI DV2</th>
<th>FSSE DV3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taught service-learning in last two years</td>
<td>Service-learning as an instructional tool</td>
<td>Course selected to complete survey</td>
</tr>
<tr>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>n=</td>
<td>20,187</td>
<td>22,171</td>
</tr>
<tr>
<td>Faculty who used service-learning</td>
<td>21.2</td>
<td>25.6</td>
</tr>
<tr>
<td>Faculty who did not use service-learning</td>
<td>78.8</td>
<td>74.4</td>
</tr>
</tbody>
</table>

The data were first analyzed using descriptive statistics in the form of cross-tabulations for each dependent variable with all the independent variables selected in each dataset. This was followed by a VIF test to check for collinearity and the logistic regression analysis for each dataset separately. All independent variables were included in each logistic regression model. A VIF test, which preceded the logistic regression analysis for each dataset, showed that high multicollinearity did not appear for any of the independent variables, with all results in each of the datasets falling below the 2.0 threshold (Foster, et al., 2006). The tests of the null hypotheses in the logistic regression analysis using SPSS showed that each null hypothesis should be rejected with each dataset for the three hypotheses.
HERI Dataset #1: Taught a Service-Learning Course in the Last Two Years

The first dataset analyzed for this study focused on the dependent variable that had the smallest faculty commitment to service-learning. This dependent variable asked respondents of the 2001-2002 HERI Faculty Survey (HERI DV1) if they taught a service-learning course in the last two years. It demonstrated that those who responded positively to this question knew what service-learning was and were willing to try it. It does not identify, however, those professors who used it more than once, or whether they believed it was a worthwhile teaching and learning experience.

The first hypothesis looked at the sociodemographic, academic and institutional characteristics of faculty who do and do not use service-learning in their courses. The cross-tabulations for the first subsidiary question show the distribution of the faculty who taught and did not teach a service-learning course in the last two years. Table 7 presents all the variables used later in the logistic regression for this dataset. Overall, this dataset showed similar percentages of positive responses for the independent variables, with about one fifth of the faculty teaching a service-learning course in the last two years, regardless of the sociodemographic, academic and institutional factors considered.

It is generally believed that female and minority faculty members are more likely to use service-learning in the classroom than male and White/Caucasian faculty members. This was the case in the first HERI dataset, where a higher percentage of female (23.7%) and minority (22.5%) faculty reported teaching a service-learning course in the last two years, with the gender gap being slightly larger than the minority status gap.

The academic status of the faculty, as defined by their position and rank, showed a slight variation between those who had tenure and those who did not. Associate Professors (22.4%)
and Professors (21.3%) had a slightly higher percentage of responses than Assistant Professors (21.1%) and faculty in other positions, such as lecturers and instructors (18.0%). This shows that those with a more secure employment position were more likely to try service-learning in the last two years, even though the percentage differences were minimal.

Table 7: Sociodemographic, academic and institutional characteristics of faculty who taught a service-learning course in the last two years

<table>
<thead>
<tr>
<th></th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>n</td>
<td>15,912</td>
<td>4,275</td>
</tr>
<tr>
<td>Gender:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>80.5</td>
<td>19.5</td>
</tr>
<tr>
<td>Female</td>
<td>76.3</td>
<td>23.7</td>
</tr>
<tr>
<td>Minority Status:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White/Caucasian</td>
<td>78.9</td>
<td>21.1</td>
</tr>
<tr>
<td>Minority</td>
<td>77.5</td>
<td>22.5</td>
</tr>
<tr>
<td>Academic Status:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professor</td>
<td>78.7</td>
<td>21.3</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>77.6</td>
<td>22.4</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>78.9</td>
<td>21.1</td>
</tr>
<tr>
<td>Other</td>
<td>82.0</td>
<td>18.0</td>
</tr>
<tr>
<td>Academic Discipline:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arts and Humanities</td>
<td>83.3</td>
<td>16.7</td>
</tr>
<tr>
<td>Science and Engineering</td>
<td>78.1</td>
<td>21.9</td>
</tr>
<tr>
<td>Professional, Business and Education</td>
<td>76.0</td>
<td>24.0</td>
</tr>
<tr>
<td>Social Science</td>
<td>76.8</td>
<td>23.2</td>
</tr>
<tr>
<td>Other</td>
<td>74.0</td>
<td>26.0</td>
</tr>
<tr>
<td>Institutional Type:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>University</td>
<td>78.4</td>
<td>21.6</td>
</tr>
<tr>
<td>4-Year Institution</td>
<td>79.0</td>
<td>21.0</td>
</tr>
<tr>
<td>Public Institution</td>
<td>77.5</td>
<td>22.5</td>
</tr>
<tr>
<td>Private Institution</td>
<td>80.1</td>
<td>19.9</td>
</tr>
</tbody>
</table>

The academic disciplines with the highest percentage of faculty reporting that they taught a service-learning course in the last two years were those in the "Other" category (26.0%), where the disciplines ranged from public administration and criminal justice to communications and
kinesiology. The Professional, Business and Education group was the second largest category, with almost one quarter (24.0%) reporting that the faculty taught a service-learning course. The range of disciplines in this category includes business, urban planning, nursing, K-12 education, and other related professional disciplines, some of which are recognized for their experiential educational elements. The third most popular set of academic disciplines is in the Social Sciences (23.2%) that include social work, political science, and gender and ethnic studies, among others that often focus on societal issues. As with the other variables, the difference in percentage points between these three categories was very small at 2.8%.

The type of institution where the respondents worked resulted in very little difference in the percentage of faculty who taught a service-learning class in the last two years. In fact, the difference between university faculty and faculty at four-year institutions was less than 1%, while a slightly higher percentage of faculty at public institutions responded positively to this question.

The second hypothesis focused on faculty workload and preferences, from how they divide their time between teaching, research and service to what pedagogical choices they make for their courses. More specifically, faculty who use service-learning in academic courses are more likely to report an orientation toward teaching over research. The descriptive statistics for the first subsidiary question shows the distribution of workflow and work preference factors (Table 8) for faculty who use and do not use service-learning, which is later used in the logistic regression analysis for this hypothesis.

About one fifth of all faculty reported using service-learning, regardless of whether or not they had a high load of nine hours or more per week or a low load of eight hours or less per week for both scheduled teaching and research. In fact, the balance between hours per week of
scheduled teaching is exactly the same for faculty who reported teaching a service-learning course in the last two years. This may be associated with professors who are willing to try service-learning within a two-year time period but are not necessarily using it consistently.

Table 8: Workload and work preferences of faculty who taught a service-learning course in the last two years

<table>
<thead>
<tr>
<th></th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Workload Structure:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scheduled teaching</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low load (8 hours/less)</td>
<td>78.8</td>
<td>21.2</td>
</tr>
<tr>
<td>High load (9 hours/more)</td>
<td>78.8</td>
<td>21.2</td>
</tr>
<tr>
<td>Research</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low load (8 hours/less)</td>
<td>78.3</td>
<td>21.7</td>
</tr>
<tr>
<td>High load (9 hours/more)</td>
<td>80.4</td>
<td>19.6</td>
</tr>
<tr>
<td>Community or Public Service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No hours per week</td>
<td>85.6</td>
<td>14.4</td>
</tr>
<tr>
<td>1 hour or more per week</td>
<td>75.4</td>
<td>24.6</td>
</tr>
<tr>
<td><strong>Primary Interest:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching</td>
<td>78.2</td>
<td>21.8</td>
</tr>
<tr>
<td>Research</td>
<td>80.5</td>
<td>19.5</td>
</tr>
</tbody>
</table>

There was an association between faculty engaged in community or public service and their use of service-learning. Even spending a minimum of one hour a week on community or public service significantly increased the percentage of professors who also reported teaching a service-learning course in the last two years. The percentage of service-learning faculty (24.6%) who spent at least one hour per week performing community or public service was almost twice as high as for those who did no community or public service each week (14.4%). On the other hand, there was a higher percentage of non-service-learning faculty who did not spend any time

---

3 This includes cases where respondents reported zero hours per week of research.
on community or public service each week (85.6%) than those who were involved in their community (75.8%).

Work preference can have an effect on how faculty members allocate their time to the faculty tripartite (Blackburn & Lawrence, 1995). In the first HERI dataset, a larger percentage of service-learning faculty reported that their primary interest was in teaching (21.8%), rather than in research (19.5%). At the same time, a higher percentage of non-service-learning faculty said their primary interest was in research (80.5%) rather than in teaching (78.2%). This shows that professors with an interest in teaching are more often trying service-learning.

The third hypothesis focused on the faculty and their relationship with the institution where they work to determine if there is harmony between individual attitudes and perceptions and institutional goals and culture. Specifically, faculty with a stronger commitment to their institution and its internal academic communities are more likely to incorporate service-learning into their courses than those who have a stronger connection to external academic communities and to their academic disciplines. The cross-tabulation shows the distribution of personal preferences and institutional cultural factors among each of the variables selected for this hypothesis. Table 9 presents the results of the variables relating to personal values, beliefs and attitudes as they relate to service-learning. Table 10 focuses on the results of the variables relating to the respondents’ view of their institutional culture at their colleges and universities.

Five questions from the 2001-2002 HERI Faculty Survey were selected to address the personal views and actions of faculty who do and do not use service-learning. It is expected that how one’s peers value a professor’s work can be associated with the pedagogical and work load choices that are made (Abes, et al., 2002). The results of the first HERI dataset showed that there was a small variation between respondents who agreed and disagreed with the statements
about their teaching and research being valued by colleagues in their departments. Even though
the percentage point difference was less than 2% in both cases, a smaller percentage of faculty
who taught a service-learning course in the last two years (21.0% versus 22.5%) and a larger
percentage of faculty who did not use it (79.3% versus 77.6%) believed that their teaching and
research was valued by faculty in their department.

Table 9: Personal preference factors relating to teaching service-learning in the past two years

<table>
<thead>
<tr>
<th></th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td><em>n</em></td>
<td>15,912</td>
<td>4,275</td>
</tr>
</tbody>
</table>

**Importance of peer recognition:**
My teaching is valued by faculty in my department
Disagree                        77.5  22.5
Agree                          79.0  21.0
My research is valued by faculty in my department
Disagree                        77.6  22.4
Agree                          79.3  20.7

**Level of involvement in past two years:**
Reforming overall mission or purpose of institution
Not Involved                     82.2  17.8
Involved                       76.6  23.4
Reforming faculty roles and rewards at institution
Not Involved                     81.5  18.5
Involved                       77.0  23.0

**Level of importance to respondent:**
Prepare undergraduate students for responsible citizenship
Not/Somewhat Important          82.8  17.2
Very Important/Essential       76.5  23.5

Faculty who used service-learning were more involved in institutional reform efforts than
those who were not using service-learning, thus confirming that they have a more internal or
"local" focus. In the first HERI dataset, a higher percentage of faculty who taught a service-
learning course in the last two years were involved in reforming their institution's overall
mission or purpose (23.4%) and in reforming faculty roles and rewards at their institution (23.0%) than those who were not involved in these two efforts. For faculty who did not teach a service-learning course in the last two years, a higher percentage reported not being involved in reforming the mission or purpose (82.2%) or faculty roles and responsibilities (81.5%) at their institutions than those who were involved in these two initiatives (76.6% and 77.0% respectively). A limitation in this analysis is that it is not known whether faculty worked at colleges and universities that were going through institutional reform during the two years preceding the completion of the 2001-2002 HERI survey.

Preparing students for responsible citizenship is one of the hallmarks of the service-learning experience (Kenworthy-U'Ren, 2008). A greater percentage of faculty members who taught a service-learning course in the last two years believed that this teaching responsibility was very important or essential (23.5%) than those who believed it was not or somewhat important (17.2%). On the other hand, the non-service-learning faculty probably believed that undergraduate students’ becoming responsible citizens was important, but not necessarily a lesson that they needed to incorporate into their courses. A larger percentage of faculty who did not teach a service-learning course in the last two years (82.8%) noted that this goal was not/somewhat important in comparison to those that believed it was very important or essential (76.5%).

Table 10 shows the results of three questions from the HERI Faculty Survey that were selected to represent the professors’ views on their institution’s culture and goals as they relate to service-learning. Institutional commitment to serving the community is an important indicator and may be associated with whether or not faculty use service-learning in their courses. First, respondents were asked for their opinion on the general statement, “Colleges should be involved
in solving social problems.” A larger percentage of service-learning faculty agreed with this general statement (22.6%) than did not (18.3%). The opposite was true for faculty who did not teach a service-learning course in the past two years, with a greater percentage disagreeing with this statement (81.7%) than agreeing with it (77.4%).

Table 10: Institutional commitment factors relating to teaching a service-learning course in the last two years

<table>
<thead>
<tr>
<th></th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>n=</td>
<td>15,912</td>
<td>4,275</td>
</tr>
<tr>
<td>Colleges should be involved in solving social problems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td>81.7</td>
<td>18.3</td>
</tr>
<tr>
<td>Agree</td>
<td>77.4</td>
<td>22.6</td>
</tr>
<tr>
<td>Many courses at my institution involve community-service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td>81.4</td>
<td>18.6</td>
</tr>
<tr>
<td>Agree</td>
<td>75.1</td>
<td>24.9</td>
</tr>
<tr>
<td>Priority at your institution: Help students learn how to bring about change in American society</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low to medium priority</td>
<td>80.2</td>
<td>19.8</td>
</tr>
<tr>
<td>High to highest priority</td>
<td>75.3</td>
<td>24.7</td>
</tr>
</tbody>
</table>

Faculty involvement in service-learning may be linked to their perception on how prevalent this experiential learning activity is within their own institutions. One quarter of the faculty who taught a service-learning course in the last two years (24.9%) believed that many courses at their institution involved community service. This was the highest positive percentage of responses to the questions about personal and institutional factors relating to teaching a service-learning course.

Faculty involvement in service-learning may also be associated with how strongly they believe there is an institutional priority at their college or university to help students learn how to bring about change in American society. Almost one quarter (24.7%) of faculty who taught a
service-learning course in the last two years believed that this was a high priority at their
institution, while a larger percentage of non-service-learning faculty believed this to be a low to
medium priority (80.2% versus 75.3%).

The results of the logistic regression for the first HERI dataset are presented in Table 11
at the end of this section. The first section of the table focuses on the first hypothesis and shows
which combination of sociodemographic, academic and institutional characteristics has the
strongest association with faculty who taught and did not teach a service-learning course in the
last two years.

Of the two sociodemographic characteristics selected for this study, gender was found to
be significantly and positively related to the use of service-learning. For the first HERI dataset,
the odds of female faculty teaching a service-learning course in the last two years were 1.278
times of that for male faculty ($p < .001$). Minority status, the other sociodemographic
characteristic, was not found to be a significant factor in the dataset.

Only one academic status category was found to be a significant factor in the first HERI
dataset. The rank of “Other” (e.g., lecturer, instructor, etc.) was significantly and negatively
related to teaching a service-learning course in the last two years. The odds of faculty in the
“Other” academic status teaching a service-learning course are 22.8% lower than for assistant
professors ($p < .001$). These results can be interpreted to mean that faculty with the least
academic status were most likely to teach a service-learning course in the last two years,
especially since no other academic rank was found to be significant.

The four academic discipline categories were all significantly and positively related to
faculty using service-learning ($p < .001$). The odds that a service-learning course was taught in
the last two years increased by a factor of 1.328 for professors in the Professional, Business and
Education discipline, by a factor of 1.476 for faculty in the Social Sciences, by a factor of 1.560 for Science and Engineering faculty, and by a factor of 1.669 for faculty members in the “Other” academic disciplines category as compared to Arts and Humanities faculty.

Both institutional characteristics were significantly and negatively associated with the use of service-learning in the first HERI dataset. The odds that faculty at private institutions taught a service-learning course in the last two years was 18.7% lower than for faculty at public institutions ($p < .001$). The odds for a service-learning course to be taught in the last two years were 10.0% lower for faculty at four-year institutions than for university faculty ($p < .05$).

Table 11 also shows the results of the logistic regression that addressed the second hypothesis that seeks to identify which combination of workflow and work preference factors had the strongest association with faculty using and not using service-learning.

There was a significant and negative relationship between carrying a high research load of nine or more hours per week and the use of service-learning. The odds for faculty with a high research load to have taught a service-learning course in the last two years were 11.5% lower than for faculty with low research loads of eight hours or less per week ($p < .01$).

Community or public service involvement had the most significant and positive relationship of the three workload components of the faculty tripartite. The odds for faculty who performed at least one hour of community or public service per week to have taught a service-learning course in the last two years increased by a factor of 1.663 in comparison to faculty who did no community or public service.

Neither the hours per week of scheduled teaching variable nor the primary interest in teaching or research variable yielded enough evidence of a significant relationship with the use of service-learning in the first HERI dataset.
The results of the logistic regression for third hypothesis identified which combination of personal and institutional commitment characteristics that focus on the academic and external communities had the strongest association with faculty using and not using service-learning in their courses. Table 11 shows the results of these variables selected for this study.

Personal preferences, attitudes, beliefs and actions can provide stronger insight into why some faculty used service-learning and others did not. Whether or not faculty believed that their research was valued by other professors in their department was significantly and negatively related to their use of service-learning. The odds for faculty who believed that their research was valued by their peers and taught a service-learning course in the last two years were 88.8% of the odds for those who did not believe this to be the case ($p < .05$). The companion statement about their teaching being valued by faculty in their department was not statistically significant in the first HERI dataset.

The level of faculty involvement in institutional reform in the last two years was found to be significantly and positively related to the use of service-learning. The odds for faculty who were involved in reforming the institutional mission or purpose having taught a service-learning course in the last two years increased by a factor of 1.241 as compared to faculty who did not participate in such activities ($p < .001$). The odds increased by a factor of 1.085 for faculty involved in reforming the faculty roles and reward system at their institution than for faculty who were not involved ($p < .05$).

How important respondents considered the educational goal of preparing their undergraduate students for responsible citizenship was significant and positive in its relationship with the use of service-learning. The odds for faculty who believed that it was very important or essential to teach their undergraduate students to become responsible citizens and to have taught
a service-learning course in the last two years increased by a factor of 1.248 in comparison to those who did not believe this to be the case ($p < .001$).

Table 11: Results of the logistic regression analysis for the first HERI dataset

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>S.E.</th>
<th>Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hypothesis #1:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>.245</td>
<td>.038</td>
<td>1.278</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>.049</td>
<td>.061</td>
<td>1.050</td>
</tr>
<tr>
<td>Academic Status:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professor</td>
<td>.040</td>
<td>.047</td>
<td>1.041</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>.024</td>
<td>.046</td>
<td>1.024</td>
</tr>
<tr>
<td>“Other”</td>
<td>-.258</td>
<td>.065</td>
<td>.772</td>
</tr>
<tr>
<td>Academic Discipline:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional, Business &amp; Education</td>
<td>.283</td>
<td>.050</td>
<td>1.328</td>
</tr>
<tr>
<td>Science &amp; Engineering</td>
<td>.445</td>
<td>.051</td>
<td>1.560</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>.389</td>
<td>.054</td>
<td>1.476</td>
</tr>
<tr>
<td>“Other”</td>
<td>.512</td>
<td>.069</td>
<td>1.669</td>
</tr>
<tr>
<td>University or 4-Year Institution</td>
<td>-.105</td>
<td>.041</td>
<td>.900</td>
</tr>
<tr>
<td>Private or Public Institution</td>
<td>-.207</td>
<td>.037</td>
<td>.813</td>
</tr>
<tr>
<td><strong>Hypothesis #2:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hours per week: Scheduled teaching</td>
<td>-.028</td>
<td>.039</td>
<td>.972</td>
</tr>
<tr>
<td>Hours per week: Research</td>
<td>-.122</td>
<td>.046</td>
<td>.885</td>
</tr>
<tr>
<td>Hours per week: Community or public service</td>
<td>.508</td>
<td>.042</td>
<td>1.663</td>
</tr>
<tr>
<td>Primary interest: Teaching or research</td>
<td>-.026</td>
<td>.046</td>
<td>.974</td>
</tr>
<tr>
<td><strong>Hypothesis #3:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My teaching is valued by faculty in my department</td>
<td>-.076</td>
<td>.061</td>
<td>.926</td>
</tr>
<tr>
<td>My research is valued by faculty in my department</td>
<td>-.118</td>
<td>.046</td>
<td>.888</td>
</tr>
<tr>
<td>Reforming overall mission or purpose of institution</td>
<td>.216</td>
<td>.041</td>
<td>1.241</td>
</tr>
<tr>
<td>Reforming faculty roles and rewards at institution</td>
<td>.082</td>
<td>.041</td>
<td>1.085</td>
</tr>
<tr>
<td>Prepare undergraduate students for responsible citizenship</td>
<td>.222</td>
<td>.039</td>
<td>1.248</td>
</tr>
<tr>
<td>Colleges should be involved in solving social problems</td>
<td>.149</td>
<td>.039</td>
<td>1.161</td>
</tr>
<tr>
<td>Many courses at my institution involve community service</td>
<td>.310</td>
<td>.038</td>
<td>1.364</td>
</tr>
<tr>
<td>Priority at your institution: Help students learn how to bring about change in American society</td>
<td>.142</td>
<td>.040</td>
<td>1.152</td>
</tr>
</tbody>
</table>

***$p < .001$; **$p < .01$; *$p < .05$
At the institutional level, faculty members provided their opinions on several key questions in the HERI dataset relating to college and university involvement in the external community. All three factors had a significant and positive relationship to the use of service-learning. The odds for teaching a service-learning course in the last two years increased by a factor of 1.161 for faculty who shared the general opinion that colleges should be actively involved in solving social problems in comparison to faculty who did not ($p < .001$). Second, the odds for faculty who believed that many courses at their institution involved students in community service would have taught a service-learning course in the last two years increased by a factor of 1.364 in comparison to faculty who did not ($p < .001$). This variable had the strongest association of the institutional variables in the first HERI dataset. Finally, the odds for faculty who agreed that it was a high priority at their college or university to help students learn how to bring about change in American society would have also taught a service-learning course in the last two years increased by a factor of 1.152 than for faculty who did not ($p < .001$).

**HERI Dataset #2: Community-Service as an Instructional Technique or Method**

The second dataset analyzed for this study also came from the 2001-2002 HERI Faculty Survey dataset. It focused on whether or not service-learning, or community service, as it was called in the survey, was used as an instructional technique or method for teaching. It demonstrated that those who responded positively to this question recognized service-learning as an accepted pedagogy, even though the dependent variable did not note the frequency that service-learning was included as an instructional method.

As previously mentioned, the first hypothesis looked at the sociodemographic, academic and institutional characteristics of faculty who did and did not use service-learning in their courses. The cross-tabulations in Table 12 show the distribution of the faculty who included and
did not include community service in their courses as an instructional technique or method with each of the independent variables that were later used in the logistic regression for this dataset. Overall, the second HERI dataset showed that on average about one fourth of faculty had used this student-centered pedagogy.

In the second HERI dataset, it was found that a greater percentage of faculty who used service-learning as an instructional tool were female (32.8%) as compared to male (20.9%). The variance between the two gender options was important to recognize, because it is generally believed that more women were using service-learning than men (Abes, et al., 2002). At the same time, a slightly larger percentage of minority professors (26.9%) reported using this pedagogy than White/Caucasian professors (25.5%).

Three academic status categories had more than one quarter of the faculty reporting that they used service-learning as an instructional method. The highest percentage of faculty was for the assistant professors (28.8%), followed by the associate professors (26.4%) and faculty in the “Other” category (26.2%). The percentage of full professors (21.7%) who used service-learning lagged behind the other categories.

The academic discipline with the largest percentage of service-learning faculty was for the Professional, Business and Education category (40.8%). This group of faculty was about three times more likely to report their use of community-service as an instructional technique in a course as the Science and Engineering faculty (11.0%).

The percentage difference between university faculty (22.7%) and faculty at four-year institutions (27.1%) demonstrates that those at master’s level and liberal arts institutions, which tend to have more of a teaching focus, were including service-learning as a student-centered pedagogy at a higher rate than those at more research-intensive universities (Furco, 2001). There
was less of a difference between public and private institutions in the second HERI dataset, with 24.6% of faculty at public institutions and 26.4% at private institutions reporting that they included community service in their courses.

Table 12: Sociodemographic, academic and institutional characteristics of faculty who included community service in their courses as instructional techniques or methods

<table>
<thead>
<tr>
<th></th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>79.1</td>
<td>20.9</td>
</tr>
<tr>
<td>Female</td>
<td>67.2</td>
<td>32.8</td>
</tr>
<tr>
<td>Minority Status:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White/Caucasian</td>
<td>74.5</td>
<td>25.5</td>
</tr>
<tr>
<td>Minority</td>
<td>73.1</td>
<td>26.9</td>
</tr>
<tr>
<td>Academic Status:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professor</td>
<td>78.3</td>
<td>21.7</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>73.6</td>
<td>26.4</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>71.2</td>
<td>28.8</td>
</tr>
<tr>
<td>Other</td>
<td>73.8</td>
<td>26.2</td>
</tr>
<tr>
<td>Academic Discipline:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arts and Humanities</td>
<td>78.6</td>
<td>21.4</td>
</tr>
<tr>
<td>Science and Engineering</td>
<td>89.0</td>
<td>11.0</td>
</tr>
<tr>
<td>Professional, Business and Education</td>
<td>59.2</td>
<td>40.8</td>
</tr>
<tr>
<td>Social Science</td>
<td>69.3</td>
<td>30.7</td>
</tr>
<tr>
<td>Other</td>
<td>70.6</td>
<td>29.4</td>
</tr>
<tr>
<td>Institutional Type:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>University</td>
<td>77.3</td>
<td>22.7</td>
</tr>
<tr>
<td>4-Year Institution</td>
<td>72.9</td>
<td>27.1</td>
</tr>
<tr>
<td>Public Institution</td>
<td>75.4</td>
<td>24.6</td>
</tr>
<tr>
<td>Private Institution</td>
<td>73.4</td>
<td>26.6</td>
</tr>
</tbody>
</table>

The second hypothesis focused on faculty workload and preferences, with the expectation that a higher percentage of faculty members who included service-learning in academic courses were more likely to report an orientation toward teaching rather than research. The cross-tabulations in the second HERI dataset showed the distribution of workflow and work preference
factors for faculty who used and did not use service-learning as an instructional tool, as seen in Table 13, which is later used in the logistic regression for this hypothesis.

Table 13: Workload and work preferences of faculty who included community service in their courses as instructional techniques or methods

<table>
<thead>
<tr>
<th></th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>n=</td>
<td>16,487</td>
<td>5,684</td>
</tr>
<tr>
<td><strong>Workload Structure:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scheduled teaching</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low load (8 hours/less)</td>
<td>76.5</td>
<td>23.5</td>
</tr>
<tr>
<td>High load (9 hours/more)</td>
<td>73.1</td>
<td>26.9</td>
</tr>
<tr>
<td>Research</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low load (8 hours/less)</td>
<td>72.4</td>
<td>27.6</td>
</tr>
<tr>
<td>High load (9 hours/more)</td>
<td>80.1</td>
<td>19.9</td>
</tr>
<tr>
<td>Community or Public Service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No hours per week</td>
<td>88.5</td>
<td>11.5</td>
</tr>
<tr>
<td>1 hour or more per week</td>
<td>67.4</td>
<td>32.6</td>
</tr>
<tr>
<td><strong>Primary Interest:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching</td>
<td>71.4</td>
<td>28.6</td>
</tr>
<tr>
<td>Research</td>
<td>81.9</td>
<td>18.1</td>
</tr>
</tbody>
</table>

The balance between hours per week of scheduled teaching and research for service-learning faculty did not show the same pattern in the second HERI dataset as it did in the first HERI dataset. A greater percentage of faculty in the second HERI dataset who included service-learning in their courses as an instructional method also carried a high teaching load (26.9%) and a low research load (27.6%), and identified their primary interest as teaching (28.1%). This result may be associated with this group of faculty being more willing to spend the time on activities related to teaching and learning rather than on advancing a research agenda. On the other hand, a larger percentage of faculty who did not use service-learning reported having a

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4 This includes cases where respondents reported zero hours per week of research.
high research load (80.1%) and a low teaching load (76.5%), as well as a preference for research (81.9%).

Lastly, there was an association between faculty engaged in community or public service and their use of service-learning. Almost three times as many faculty who included service-learning in their courses (32.6%) spent at least one hour per week performing community or public service than those who did none (11.5%). A higher percentage of faculty who did not use this pedagogy reported devoting no time to community or public service each week (88.5%) than those who engaged in this type of activity (67.4%).

The third hypothesis focused on the faculty and their relationship with the institution where they worked to determine if there was an association between personal attitudes and perceptions and institutional goals and culture. As noted earlier, it was expected that faculty with a stronger commitment to their institution and its internal academic communities would be more likely to incorporate service-learning into their courses than those who had a stronger connection to external academic communities and to their academic disciplines. The cross-tabulations in the second HERI dataset showed the distribution of personal preferences and institutional cultural factors among each of the variables selected for this study. Table 14 presents the results of the variables relating to personal values, beliefs and attitudes as they relate to service-learning. Table 15 focuses on the results of the variables relating to the respondents’ view of their institutional culture at their colleges and universities.

Five questions from the HERI dataset were selected to address the personal views and actions of faculty who do and do not use service-learning. First, how one’s peers value the faculty member’s work may be related to the pedagogical choices made for academic courses. The results of the second HERI dataset showed little difference as to whether or not respondents
believed their colleagues in their departments valued their teaching and research. Even though the percentage point difference was less than 2% in both cases, a larger percentage of faculty who used service-learning as an instructional tool believed that they had the support of their peers for teaching (25.8% versus 24.3%) and a smaller percentage noted that their research was valued (25.2% versus 26.7%).

Table 14: Personal preference factors relating the inclusion of community service as an instructional technique or method

<table>
<thead>
<tr>
<th>Importance of peer recognition:</th>
</tr>
</thead>
<tbody>
<tr>
<td>My teaching is valued by faculty in my department</td>
</tr>
<tr>
<td>Disagree</td>
</tr>
<tr>
<td>Agree</td>
</tr>
<tr>
<td>My research is valued by faculty in my department</td>
</tr>
<tr>
<td>Disagree</td>
</tr>
<tr>
<td>Agree</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level of involvement in past two years:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reforming overall mission or purpose of institution</td>
</tr>
<tr>
<td>Not Involved</td>
</tr>
<tr>
<td>Involved</td>
</tr>
<tr>
<td>Reforming faculty roles and rewards at institution</td>
</tr>
<tr>
<td>Not Involved</td>
</tr>
<tr>
<td>Involved</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level of importance to respondent:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepare undergraduate students for responsible citizenship</td>
</tr>
<tr>
<td>Not/Somewhat Important</td>
</tr>
<tr>
<td>Very Important/Essential</td>
</tr>
</tbody>
</table>

Faculty who used service-learning were more involved in institutional reform efforts than those who were not using service-learning, thus confirming that they have a more internal or “local” focus. In the second HERI dataset, a higher percentage of faculty who used service-
learning as an instructional method were also involved in reforming their institution’s overall mission or purpose (29.4%) and in reforming faculty roles and rewards at their institution (28.8%) than those that were not involved in these two efforts (19.8% and 21.0%, respectively). For faculty who did not use service-learning as an instructional technique, a higher percentage reported not being involved in reforming the mission or purpose (80.2%) or faculty roles and responsibilities (79.0%) at their institutions in the last two years than those who were involved in these two initiatives (70.6% and 71.2%, respectively). A limitation in this analysis is that it is not known whether faculty were working at institutions that were attempting to reform the mission and purpose or the faculty roles and responsibilities during the two years preceding the completion of the 2001-2002 HERI survey.

As noted with the first HERI dataset, preparing students for responsible citizenship was one of the hallmarks of the service-learning experience. More than twice as many professors who used service-learning as an instructional tool in the second HERI dataset believed that this teaching responsibility was very important or essential (31.7%), as compared to those who believed it was not, or somewhat, important (15.3%). On the other hand, the non-service-learning faculty probably believed that undergraduate students’ becoming responsible citizens was important, but not necessarily something that they needed to focus on in the courses they taught, with one-fifth more professors (84.7%) noting that this goal was not or somewhat important than those who believed it was very important or essential (68.3%).

Table 15 shows the results of the three questions in the second HERI dataset that were selected to represent the professor’s view on the institutional culture as it relates to how prevalent service-learning was found to be within their own colleges and universities. Institutional commitment to serving the community was an important indicator, and may be
associated with whether or not faculty use service-learning in their courses. First, respondents were asked for their opinion on the general statement, “Colleges should be involved in solving social problems.” A significantly larger percentage of service-learning faculty agreed with this general statement (38.0%) than did not (17.2%). The opposite was true for faculty who did not use service-learning as an instructional technique, with a greater percentage disagreeing with this statement (82.8%) than agreeing with it (62.0%).

Table 15: Institutional commitment factors relating the inclusion of community service as an instructional technique or method

<table>
<thead>
<tr>
<th></th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>n=</td>
<td>16,487</td>
<td>5,684</td>
</tr>
<tr>
<td>Colleges should be involved in solving social problems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td>82.6</td>
<td>17.4</td>
</tr>
<tr>
<td>Agree</td>
<td>70.2</td>
<td>29.8</td>
</tr>
<tr>
<td>Many courses at my institution involve community-service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td>82.8</td>
<td>17.2</td>
</tr>
<tr>
<td>Agree</td>
<td>62.0</td>
<td>38.0</td>
</tr>
<tr>
<td>Priority at your institution: Help students learn how to bring about change in American society</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low to medium priority</td>
<td>78.9</td>
<td>21.1</td>
</tr>
<tr>
<td>High to highest priority</td>
<td>63.1</td>
<td>36.9</td>
</tr>
</tbody>
</table>

More than double the percentage of faculty who used service-learning as an instructional tool (38.0%) believed that many courses at their institution involved community service than those that did not (17.2%). At the same time, more than a third (36.9%) of the professors who included service-learning in their courses as an instructional technique believed that helping students learn how to bring about change in American society was a high priority at their institutions, significantly more than those who did not believe it to be a priority (21.1%). These two factors had the highest positive percentage of responses to the questions about personal and
institutional factors that may be related to the use of service-learning. On the other hand, a lower percentage of non-service-learning faculty agreed that many courses involved community service (62.0% versus 82.8%) and believed that it was a high priority to teach students how to bring about change in American society (63.1% versus 78.9%) at their institutions than felt otherwise.

The results of the logistic regression for the second HERI dataset are presented in Table 16 at the end of this section. The first part shows the results for the combination of sociodemographic, academic and institutional characteristics that had the strongest association with faculty who did and did not use service-learning in their courses as instructional techniques or methods.

Of the two sociodemographic characteristics selected for this study, gender was found to be significantly and positively related to the use of service-learning. The expected odds of female faculty using service learning as an instructional technique increased by a factor of 1.434 as compared with their male counterparts ($p < .001$). Minority status did not yield enough evidence of a significant relationship with the use of service-learning in this dataset.

Academic status, the first of two academic characteristics analyzed, was significantly and negatively associated with the use of service-learning in relation to Assistant Professors, the reference group, in the second HERI dataset. The odds for using service-learning as an instructional method were 22.5% lower for Professors, 17.5% lower for Associate Professors, and 25.1% lower for “Other” types of faculty than the odds for Assistant Professors ($p < .001$). In other words, using service-learning as an instructional method was most often related to having an academic status of Assistant Professor in the second HERI dataset.

Three of the academic discipline categories were significantly and positively related to service-learning. The odds that a service-learning course was used as an instructional tool
increased by a factor of 2.004 for Professional, Business and Education faculty, by a factor of 1.705 for Social Science faculty, and by a factor of 1.499 for the “Other” academic discipline category as compared with faculty in the Arts and Humanities ($p < .001$). The Science and Engineering discipline group, on the other hand, was significantly and negatively related to faculty use of service-learning. The odds that Science and Engineering faculty use service-learning as an instructional technique were only 54.8% of the odds for the Arts and Humanities faculty ($p < .001$).

For the institutional characteristics, working at a private or public institution was found to be significantly and negatively associated with the use of service-learning in the second HERI dataset. The odds for faculty at private institutions to have used service-learning as an instructional method was 11.5% lower than for faculty at public institutions ($p < .01$). There was no significant relationship between the use of service-learning and whether faculty taught at a university or four-year institution in the second HERI dataset.

The results of the logistic regression analysis for the second hypothesis are also presented in Table 16, and identify which combination of workflow and work preference factors had the strongest association with faculty using and not using service-learning in their courses.

The research showed that there was a significant and positive association in the second HERI dataset between scheduled teaching and the use of service-learning. The odds for faculty carrying a high teaching load of nine hours or more per week having used service-learning as an instructional method were 1.091 times that of faculty with a low teaching load of no more than eight hours per week ($p < .05$).

The relationship between research and service-learning was opposite of what it was for teaching and service-learning. There was a significant and negative relationship between
carrying a high research load of nine or more hours per week and the use of service-learning. The odds for faculty with high research loads having used service-learning were 10.8% lower, in comparison to faculty with a low research load of eight or fewer hours per week ($p < .05$).

Community or public service involvement had the most significant and positive relationship of the three workload components of the faculty tripartite. The odds for faculty who performed at least one hour of community or public service per week having used service-learning as an instructional method was 2.820 times higher than for faculty who reported no weekly community or public service work ($p < .001$).

Having a primary interest in teaching or research was significant only in the second HERI dataset. In this case, a primary interest in research was negatively related to the faculty’s use of service-learning. The odds for faculty with a primary interest in research having used service-learning as an instructional method was 23.8% lower than for faculty with a primary interest in teaching ($p < .001$). Overall, the use of service-learning increased when faculty in the second HERI dataset preferred teaching rather than research, carried high teaching loads and lower research loads, and were involved in community or public service.

The results of the logistic regression for the third hypothesis, as found in Table 16, address which combination of personal and institutional commitment characteristics that focus on the academic and external communities has the strongest association with faculty using and not using service-learning in their courses.

Personal preferences, attitudes, beliefs and actions can provide stronger insight into why some faculty use service-learning and others do not. Whether or not faculty believed that their research was valued by other professors in their departments was significantly and negatively related to their use of service-learning. The odds for faculty who believe that their research was
valued by their peers and used service-learning as an instructional method were 17.4% lower than for faculty who did not believe this to be the case ($p < .001$). The companion statement about their teaching being valued by faculty in their department was not found to be statistically significant in the second HERI dataset.

The level of faculty involvement in institutional reform in the last two years was found to be significantly and positively related to the use of service-learning. The odds for faculty who were involved in reforming the mission and purpose of their institution and used service-learning as an instructional method were 1.397 times that of those who were not involved ($p < .001$). The odds for faculty who were involved in reforming the faculty roles and reward system at their institution and used service-learning as an instructional technique were 1.181 times that of faculty who did not participate in such activities ($p < .001$).

How important respondents considered the educational goal of preparing their undergraduate students for responsible citizenship was significant and positive in its association with the use of service-learning. The odds for service-learning’s being used as an instructional method increased by a factor of 1.661 for faculty who believe that it was very important or essential to teach their undergraduate students to become responsible citizens in comparison to faculty who did not endorse this effort ($p < .001$).

At the institutional level, faculty members provided their opinions on several key questions in the HERI dataset relating to college and university involvement in the external community. There was a significant and positive relationship between faculty who agreed with the general opinion that colleges should be actively involved in solving social problems and their use of service-learning. The odds for service-learning to be used as an instructional technique
for faculty who supported this statement were 1.540 times of those who did not believe in this statement \( (p < .001) \).

Table 16: Results of the logistic regression analysis for the second HERI dataset

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>S.E.</th>
<th>Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( n = 22,171 )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypothesis #1:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>.361</td>
<td>.036</td>
<td>1.434</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>.033</td>
<td>.059</td>
<td>1.034</td>
</tr>
<tr>
<td>Academic Status:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professor</td>
<td>-.255</td>
<td>.046</td>
<td>.775</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>-.192</td>
<td>.045</td>
<td>.825</td>
</tr>
<tr>
<td>“Other”</td>
<td>-.289</td>
<td>.059</td>
<td>.749</td>
</tr>
<tr>
<td>Academic Discipline</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional, Business &amp; Education</td>
<td>.695</td>
<td>.045</td>
<td>2.004</td>
</tr>
<tr>
<td>Science &amp; Engineering</td>
<td>-.602</td>
<td>.059</td>
<td>.548</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>.533</td>
<td>.050</td>
<td>1.705</td>
</tr>
<tr>
<td>“Other”</td>
<td>.405</td>
<td>.066</td>
<td>1.499</td>
</tr>
<tr>
<td>University or 4-Year Institution</td>
<td>-.030</td>
<td>.040</td>
<td>.971</td>
</tr>
<tr>
<td>Private or Public Institution</td>
<td>-.122</td>
<td>.036</td>
<td>.885</td>
</tr>
<tr>
<td>Hypothesis #2:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hours per week: Scheduled teaching</td>
<td>.087</td>
<td>.038</td>
<td>1.091</td>
</tr>
<tr>
<td>Hours per week: Research</td>
<td>-.115</td>
<td>.046</td>
<td>.892</td>
</tr>
<tr>
<td>Hours per week: Community or public service</td>
<td>1.037</td>
<td>.043</td>
<td>2.820</td>
</tr>
<tr>
<td>Primary interest: Teaching or research</td>
<td>-.271</td>
<td>.046</td>
<td>.762</td>
</tr>
<tr>
<td>Hypothesis #3:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My teaching is valued by faculty in my department</td>
<td>-.007</td>
<td>.061</td>
<td>.993</td>
</tr>
<tr>
<td>My research is valued by faculty in my department</td>
<td>-.191</td>
<td>.045</td>
<td>.826</td>
</tr>
<tr>
<td>Reforming overall mission or purpose of institution</td>
<td>.334</td>
<td>.040</td>
<td>1.397</td>
</tr>
<tr>
<td>Reforming faculty roles and rewards at institution</td>
<td>.166</td>
<td>.040</td>
<td>1.181</td>
</tr>
<tr>
<td>Prepare undergraduate students for responsible citizenship</td>
<td>.507</td>
<td>.039</td>
<td>1.661</td>
</tr>
<tr>
<td>Colleges should be involved in solving social problems</td>
<td>.432</td>
<td>.039</td>
<td>1.540</td>
</tr>
<tr>
<td>Many courses at my institution involve community service</td>
<td>.872</td>
<td>.036</td>
<td>2.393</td>
</tr>
<tr>
<td>Priority at your institution: Help students learn how to bring about change in American society</td>
<td>.332</td>
<td>.037</td>
<td>1.394</td>
</tr>
</tbody>
</table>

***p<.001; **p<.01; *p<.05
The extent to which respondents agreed with the statement "many courses involve students in community service at your college or university" was significantly and positively related to the use of service-learning. The odds for faculty members who believed that many courses at their institutions involved community-service would have used service-learning as an instructional method increased by a factor of 2.393, as compared to those who did not believe this to be the case ($p < .001$). This result had the strongest association of all the predictive variables in the second HERI dataset.

How important respondents believe that it was a high priority at their college or university to help students learn how to bring about change in American society was found to be significantly and positively related to the use of service-learning. The odds for faculty who agreed with this statement and used service-learning as an instructional method increased by a factor of 1.394, as compared to faculty who did not ($p < .001$).

**FSSE Dataset #3: Service-Learning in the Selected Course**

The third dataset analyzed for this study consisted of a random one fifth of all respondents to the 2003 FSSE Survey. Faculty were instructed to select one course in which to complete the survey, and therefore, was the one that they most wanted to discuss with other professors. The dependent variable in this dataset asked if community service was included in the selected course, which is within the definition of service-learning. It was expected that professors who responded positively to this question showed the greatest commitment to advancing service-learning of the three datasets being analyzed, having made the choice to answer the pedagogical questions in FSSE survey for their service-learning course. The decision to use a service-learning course may be connected to institutional and academic leaders’ encouraging service-learning faculty to promote the benefits of this pedagogy to their peers.
The first hypothesis looks at the sociodemographic, academic and institutional characteristics of faculty use of service-learning. The cross-tabulation shows the distribution of the faculty who included and did not include service-learning in their selected courses. Table 17 presents the variables that were then used in the logistic regression for this dataset. Overall, this dataset showed that the opportunity to discuss their use of service-learning may have been a contributing factor in the higher percentage of faculty responding positively to the dependent variable. An average of one third of the respondents used this instructional method, which was the largest percentage of the three datasets analyzed in this study.

A larger percentage of female faculty (41.8%) than male faculty (28.5%) selected a course with a service-learning component when completing the FSSE survey. At the same time, nearly the same percentage of minority faculty (40.1%) as female faculty reported using service-learning in their selected courses, while a third of all White/Caucasian faculty (33.6%) also reported this inclusion. The variance found in the two sociodemographic categories was important to recognize because it showed that many more female and minority faculty were not only engaged in service-learning, but were also willing to share their experiences with others.

Three of the four academic status categories had more than one third of the faculty reporting that they used service-learning in their selected courses. The “Other” type of professor had the highest percentage of service-learning faculty (37.9%), followed by the Associate Professors (36.8%) and the Assistant Professors (34.6%). The percentage of Professors who used service-learning lagged behind the other categories with 28.9% responding positively to this pedagogical option. The fact that a higher percentage of Associate Professors reported using service-learning in their selected courses than Assistant Professors may be a function of the latter group’s being less willing to tell others that they were using this student-centered pedagogy,
which might be perceived as taking time away from research and other activities needed for advancement.

Table 17: Sociodemographic, academic and institutional characteristics of faculty who included service-learning in their selected courses

<table>
<thead>
<tr>
<th></th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td><strong>n=</strong></td>
<td>1,585</td>
<td>838</td>
</tr>
<tr>
<td>Gender:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>71.5</td>
<td>28.5</td>
</tr>
<tr>
<td>Female</td>
<td>58.2</td>
<td>41.8</td>
</tr>
<tr>
<td>Minority Status:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White/Caucasian</td>
<td>66.4</td>
<td>33.6</td>
</tr>
<tr>
<td>Minority</td>
<td>59.9</td>
<td>40.1</td>
</tr>
<tr>
<td>Academic Status:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professor</td>
<td>71.1</td>
<td>28.9</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>63.2</td>
<td>36.8</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>65.4</td>
<td>34.6</td>
</tr>
<tr>
<td>Other</td>
<td>62.1</td>
<td>37.9</td>
</tr>
<tr>
<td>Academic Discipline:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arts and Humanities</td>
<td>69.7</td>
<td>30.3</td>
</tr>
<tr>
<td>Science and Engineering</td>
<td>85.6</td>
<td>14.4</td>
</tr>
<tr>
<td>Professional, Business and Education</td>
<td>48.7</td>
<td>51.3</td>
</tr>
<tr>
<td>Social Science</td>
<td>65.2</td>
<td>34.8</td>
</tr>
<tr>
<td>Other</td>
<td>56.5</td>
<td>43.5</td>
</tr>
<tr>
<td>Institutional Type:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>University</td>
<td>69.0</td>
<td>31.0</td>
</tr>
<tr>
<td>4-Year Institution</td>
<td>63.1</td>
<td>36.9</td>
</tr>
<tr>
<td>Public Institution</td>
<td>65.4</td>
<td>34.6</td>
</tr>
<tr>
<td>Private Institution</td>
<td>65.4</td>
<td>34.6</td>
</tr>
</tbody>
</table>

The Professional, Business and Education academic disciplines had the highest percentage of service-learning faculty, with more than half (51.3%) selecting a service-learning course to complete the FSSE survey. This was followed by faculty in the “Other” category (43.5%), then Social Science faculty (34.8%) and Arts and Humanities faculty (30.3%). The smallest percentage of faculty who wanted to discuss their use of service-learning were in the Science and Engineering discipline group (14.4%).
In the FSSE dataset, there was a variance between the inclusion of service-learning in the selected courses and faculty who taught at the major doctoral research universities or at four-year institutions, which included master's level and bachelor's level institutions. A slightly higher percentage of faculty at four-year institutions (36.9%) than university faculty (31.0%) used a service-learning course to complete the FSSE survey. On the other hand, 34.6% of service-learning faculty at both private and public institutions included service learning in their selected courses.

The second hypothesis focused on faculty workload and work preferences, with the expectation that a higher percentage of faculty members who used service-learning in their selected courses were more likely to report an orientation toward teaching rather than research.

The cross-tabulations in the FSSE dataset show the distribution of work effort and preference factors in Table 18 and the course structure preferences in Table 19 for faculty who used and did not use service-learning.

Table 18: Workload and work preferences of faculty who included service-learning in their selected courses

<table>
<thead>
<tr>
<th></th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching undergraduates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low load (8 hours or less per week)</td>
<td>66.6</td>
<td>33.4</td>
</tr>
<tr>
<td>High load (9 hours or more per week)</td>
<td>64.3</td>
<td>35.8</td>
</tr>
<tr>
<td>Working with undergraduates on research</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>69.4</td>
<td>30.6</td>
</tr>
<tr>
<td>Yes</td>
<td>61.9</td>
<td>38.1</td>
</tr>
</tbody>
</table>

Two factors selected from the FSSE dataset represented the time spent with undergraduate students, one focusing on teaching undergraduate students and the other working
with them on research. There was a small percentage difference in the hours spent per week teaching undergraduate students. For service-learning faculty, a slightly higher percentage had a high teaching load of nine or more hours per week (35.8%), than had a low teaching load of eight or fewer hours per week (33.4%). There was a larger gap with faculty working with undergraduates on research than there was with faculty teaching undergraduates. A higher percentage of service-learning faculty reported working with undergraduates on research (38.1%) than those who did not (30.6%). At the same time, fewer non-service-learning professors worked with undergraduates on research (61.9%) than did not (69.4%). It is possible that the service-learning faculty saw more value in accomplishing their research goals with undergraduate student assistance.

Work preferences relating to how a course was structured were also associated with the use of service-learning. From a pedagogical perspective, approximately twice as many faculty who used service-learning in their courses also reported higher rates of experiential activities, such as labs and field work (47.2%), than those who did not (23.4%). Twice as many service-learning faculty frequently included activities designed to develop their students’ skills in solving real-world problems (42.9%) than those who included very little or some activities relating to this teaching method (21.4%). The gap was smaller for non-service-learning faculty, with about one third reporting that they did not include experiential activities in their courses (75.7%) or spent little class time on activities relating to solving complex real-world problems (88.6%) than those who did include experiential activities (52.8%) or extensively asked their students to solve complex real-world problems as part of their coursework (57.1%).

More than twice as many service-learning professors in the FSSE dataset spent less than half of their class time lecturing (41.2%) than those who lectured for 50% or more of the class
time (20.4%). In addition, about one quarter more professors who did not use service-learning in their selected courses reported spending 50% or more of their time lecturing (79.6%) than those who spent less than half of the class time using this teaching method (58.8%).

Table 19: Course structure preferences of faculty who included service-learning in their selected courses

<table>
<thead>
<tr>
<th></th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Class time includes experiential activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>75.7</td>
<td>23.4</td>
</tr>
<tr>
<td>Yes</td>
<td>52.8</td>
<td>47.2</td>
</tr>
<tr>
<td>Solving complex real-world problems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very little/some</td>
<td>88.6</td>
<td>21.4</td>
</tr>
<tr>
<td>Quite a bit/very much</td>
<td>57.1</td>
<td>42.9</td>
</tr>
<tr>
<td>Lecture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-49% of class time</td>
<td>58.8</td>
<td>41.2</td>
</tr>
<tr>
<td>50% or more of class time</td>
<td>79.6</td>
<td>20.4</td>
</tr>
</tbody>
</table>

The third hypothesis focuses on the faculty and their relationship with the institution where they worked to determine if there was an association between personal attitudes and perceptions and institutional goals and culture. Specifically, faculty with a stronger commitment to their institution and its internal academic communities were expected to be more likely to incorporate service-learning into their selected courses than those who had a stronger connection to external academic communities and to their academic disciplines. The cross-tabulations in the FSSE dataset show the distribution of personal preferences and institutional cultural factors among each of the variables selected for this study. Table 20 presents the results of the variables relating to personal values, beliefs and attitudes as they relate to service-learning.

Two questions in the FSSE dataset focused on the level of importance that the respondents placed on undergraduates having the opportunity to work with faculty on research
projects outside of course program requirements and to have an experiential learning experience, such as a practicum, internship, field placement or co-op experience. In both cases, there was about a 20% variance between service-learning and non-service-learning faculty who believed both experiences to be very important or essential. About 40% of service-learning faculty and 60% of non-service-learning faculty supported these statements. There was, however, a much larger gap between service-learning and non-service-learning faculty who believed that undergraduate participation in experiential learning activities was not or somewhat important with 84.5% of non-service-learning faculty and only 15.5% of service-learning holding this view.

Table 20: Personal preference factors relating to the inclusion of service-learning in the selected course

<table>
<thead>
<tr>
<th></th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>n=</td>
<td>1,585</td>
<td>838</td>
</tr>
<tr>
<td>Undergraduates at your institution working on research projects with faculty outside of course program requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not/Somewhat Important</td>
<td>67.5</td>
<td>32.5</td>
</tr>
<tr>
<td>Important/Very Important</td>
<td>61.1</td>
<td>38.9</td>
</tr>
<tr>
<td>Undergraduates at your institution having a practicum, internship, field experience, co-op experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not/Somewhat Important</td>
<td>84.5</td>
<td>15.5</td>
</tr>
<tr>
<td>Important/Very Important</td>
<td>59.4</td>
<td>40.6</td>
</tr>
</tbody>
</table>

The results of the logistic regression for the FSSE dataset are presented in Table 21 at the end of this section. The first part of the table addresses which combination of sociodemographic, academic and institutional characteristics had the strongest association with faculty who use and do not use service-learning in their selected courses.
Of the two sociodemographic characteristics included in this study, only gender was significantly and positively related to the use of service-learning. The expected odds of female faculty selecting a service-learning course were 1.359 times that of male faculty \( (p < .01) \). Race/ethnicity, the other sociodemographic characteristic, was not found to be a significant factor in the dataset.

The only academic status category in the FSSE dataset to be significantly related to service-learning was the rank of "Other" (e.g., lecturer, instructor, etc.). With a positive relationship established, the odds for using service-learning in a selected course increased by a factor of 1.361 \( (p < .05) \) for the "Other" type of faculty as compared to assistant professors, the reference group. These results could be interpreted to mean that faculty with the least academic status were more likely to use service-learning, especially since the ranks of professor and associate professor were not found to be statistically significant in either of these datasets.

Two of the academic disciplines were significantly related to the use of service-learning in the FSSE dataset. First, the Professional, Business and Education discipline group was significantly and positively related to faculty use of service-learning. The odds for Professional, Business and Education faculty including service-learning in the selected courses was 1.557 times that of Arts and Humanities faculty, the reference group \( (p < .01) \). The Science and Engineering discipline group was significantly and negatively related to faculty use of service-learning. The odds that service-learning was used in the selected course were 68.4% lower for Science and Engineering faculty, as compared to Arts and Humanities faculty \( (p < .001) \). The Social Science disciplines and the disciplines in the "Other" category were not statistically significant in the FSSE dataset.
Neither institutional type variable yielded enough evidence of a significant relationship with the use of service-learning in the FSSE dataset to be included in this analysis.

The results of the logistic regression that address the second hypothesis, as found in Table 21, seeks to identify which combination of workflow and work preference factors in the FSSE dataset had the strongest association with faculty using and not using service-learning in their selected courses.

Working with undergraduates on research each week was found in the FSSE dataset to be significantly and positively related to the use of service-learning. The odds for faculty whose work with undergraduates on research included service-learning in their selected course were 1.496 times that of faculty who did not ($p < .001$). Teaching undergraduates did not yield enough evidence to have a significant relationship with the use of service-learning.

Three variables were selected from the FSSE dataset to provide additional insight into the course structure and use of different teaching methods as they relate to service-learning. The inclusion of an experiential component and the extent to which the selected course was structured so that students learn and develop skills for solving complex real-world problems were both significantly and positively related to the use of service-learning. The odds for faculty who dedicated class time to experiential activities (labs, fieldwork, etc.) having included service-learning in their selected courses increased by a factor of 2.560 ($p < .001$), in comparison to faculty who did not. The odds for faculty who structured their selected course in a way that encouraged students to learn how to solve complex real-world problems having included service-learning in their selected courses were 2.138 ($p < .001$) times that of faculty who did not. These two factors had the strongest relationship to the use of service-learning in the second hypothesis.
Table 21: Results of the logistic regression analysis for the FSSE dataset

<table>
<thead>
<tr>
<th>Hypothesis #1:</th>
<th>B</th>
<th>S.E.</th>
<th>Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>.306</td>
<td>.101</td>
<td>1.359</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>.139</td>
<td>.133</td>
<td>1.149</td>
</tr>
<tr>
<td>Academic Status:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professor</td>
<td>.017</td>
<td>.140</td>
<td>1.018</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>.193</td>
<td>.133</td>
<td>1.212</td>
</tr>
<tr>
<td>“Other”</td>
<td>.308</td>
<td>.136</td>
<td>1.361</td>
</tr>
<tr>
<td>Academic Discipline</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional, Business &amp; Education</td>
<td>.443</td>
<td>.136</td>
<td>1.557</td>
</tr>
<tr>
<td>Science &amp; Engineering</td>
<td>-1.154</td>
<td>.176</td>
<td>.316</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>-.042</td>
<td>.157</td>
<td>.959</td>
</tr>
<tr>
<td>“Other”</td>
<td>.084</td>
<td>.157</td>
<td>1.088</td>
</tr>
<tr>
<td>University or 4-Year Institution</td>
<td>.152</td>
<td>.108</td>
<td>1.164</td>
</tr>
<tr>
<td>Private or Public Institution</td>
<td>-.131</td>
<td>.105</td>
<td>.877</td>
</tr>
</tbody>
</table>

| Hypothesis #2: |   |     |        |
| Teaching undergraduates | .006| .100| 1.006  |
| Working with undergraduates on research | .403| .105| 1.496  |
| Class time includes experiential activities | .940| .100| 2.560  |
| Solving complex real-world problems | .760| .106| 2.138  |
| Lecture | -.564| .117| .569   |

| Hypothesis #3: |   |     |        |
| Level of importance placed on undergraduates are working on research projects with faculty outside of course program requirements | .163| .109| 1.177  |
| Level of importance placed on undergraduates are having a practicum, internship, field experience, co-op experience | .785| .136| 2.193  |

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

The percentage of time spent lecturing, on the other hand, was significantly and negatively related to the use of service-learning. The odds for service-learning to be included in the selected course was 43.1% lower for faculty who spent 50% or more of the class time lecturing, in comparison to faculty who spent less than half of the time lecturing (p < .001). The
variable focusing on hours per week of teaching undergraduate students was not significantly related to service-learning in the FSSE dataset.

The results of the logistic regression for the third hypothesis found in Table 21 showed which personal preference factors had the strongest association with faculty who used and did not use service-learning in their selected courses.

The level of importance that respondents placed on undergraduates at their institution having a practicum, internship, field experience, or co-op experience was one of the most significant factors in relation to the use of service-learning. The odds for faculty who believed students participating in experiential learning activities to be important or very important would have also used service-learning in the selected courses increase by a factor of 2.193 ($p < .001$), in comparison to those who believed it was not or only somewhat important for their students to have this type of learning experience ($p < .001$). The level of importance that the respondents place on undergraduates at their institution having the experience of working on a research project with faculty outside of course program requirements was not found to be significantly related to the use of service-learning.

**Summary of Key Findings and Comparison of Datasets**

In general, this study found that the more committed faculty are to using service-learning and telling others about the experience, the greater the percentage of faculty who responded that they used this pedagogical option. Several key findings have been identified as a result of both the descriptive analysis and the logistic regression analysis to determine which factors were more closely associated with service-learning faculty and which factors may be more likely to describe faculty who did not use service-learning. The first hypothesis was that faculty use of service-learning was related to sociodemographic, academic and institutional characteristics. This study
found that a greater percentage of service-learning faculty and a smaller percentage of non-service-learning faculty were women and minorities, although gender was the only variable to be statistically significant.

The analysis of academic status as a predictive variable for service-learning use was inconclusive, even though a few patterns did emerge. The rank of associate professor had the highest percentage of service-learning faculty in the first HERI dataset and the second highest percentage in the second HERI dataset and FSSE dataset. The rank of professor had the smallest percentage of service-learning participation in the second HERI dataset and the FSSE dataset. The percentage of assistant professors and faculty in “Other” academic positions varied, depending on which dataset was analyzed. The assistant professor category had the highest percentage of service-learning faculty in the second HERI dataset and the third highest percentage in the other two datasets. The logistic regression results confirmed that academic status was not necessarily related to faculty using service-learning, especially since the two tenured positions, professor and associate professor, were only statistically significant and negatively related to the use of service-learning in the second HERI dataset, as compared to assistant professors. These results do not confirm the findings of Antonio, Astin and Cress (2000), who wrote that those with the least academic status had high levels of commitment to, and involvement in, service-learning.

While faculty in all disciplines used service-learning, those in the Professional, Business and Education disciplines reported the highest involvement in two datasets (HERI DV2 and FSSE DV3) and the second highest in the third dataset (HERI DV1). The Social Science faculty who used service-learning were consistently second to the Professional, Business and Education
faculty. The Science Engineering faculty and the Arts and Humanities faculty, on the other hand, were the least likely to use service-learning.

The type of institution where faculty worked had mixed results. In the first HERI dataset, a higher percentage of faculty working at universities and at public institutions reported teaching a service-learning course in the last two years, and the odds that they would use the pedagogy were higher than for faculty at four-year or private institutions. The second HERI dataset showed the opposite result, with a larger percentage of faculty at four-year institutions and private institutions reporting that they used service-learning as an instructional technique. Yet, the odds for faculty at private institutions using service-learning was lower than for those at public institutions. The FSSE dataset gave minimal additional insight into the relationship between academic disciplines and the use of service-learning, with a larger percent of faculty at four-year institutions using the instructional method compared to university faculty, and faculty using service-learning was equally distributed between public and private institutions. Faculty use of service-learning was not found to be significantly related to either institutional type variable in the FSSE dataset or related to whether faculty worked at a university or four-year institution in the second HERI dataset. The analysis of the three databases in this study gave minimal support for the first hypothesis, where it was expected that faculty use of service-learning was related to sociodemographic, academic, and institutional characteristics, with those in the least tenuous positions reporting that they used service-learning the most.

The second hypothesis was that service-learning use was related to the faculty tripartite, with the expectation that service-learning faculty would report a greater preference for teaching, and that non-service-learning faculty would identify research as their primary interest. The results showed that service-learning was closely associated with faculty having a teaching
preference and a high teaching load, as well as spending some time each week performing community or public service. Service-learning faculty included undergraduates in their research outside of class time, included other forms of experiential education in their courses, and wanted their students to develop the skills to solve complex real-world problems. Non-service-learning faculty, on the other hand, tended to prefer research more than teaching, and lectured for at least half of the class time. They were less concerned with their students’ participating in experiential educational activities or learning how to apply the theories taught in class to real-world problems.

Overall, research and service workload variables were significantly related to service-learning use in all three datasets. The teaching variables did not yield enough evidence in the first HERI dataset and the FSSE dataset, and only a small level of significance in the second HERI dataset. An interest in teaching over research was significant in both HERI datasets. The pedagogical choices faculty made were the most significant predictive variables for this hypothesis, and point to the need to focus more on how faculty structure their courses if institutional and academic leaders want to expand service-learning on their campuses. In this study, how much time faculty spent teaching was less of a factor than how they structured their courses and the types of learning experiences they wanted their students to have. Given the fact that service-learning takes more time to plan and implement, however, it is still important to consider the time spent on teaching in relation to other faculty workload issues.

The third hypothesis was that faculty who showed a greater commitment to and involvement in their institution’s mission and culture were more likely to use service-learning. Faculty use of service-learning in this study was found to be associated with the relationship that they had with their institutions. Faculty who used service-learning had a strong commitment to
their institutions, although they were less concerned about whether or not their peers valued their teaching or research. They believed that many courses at their institutions involved students in community service, and that there was a high priority at their institutions to help students learn how to bring about change in society. This was supported by their belief that colleges should be involved in solving social problems. Faculty who did not use service-learning tended to be less involved in their institutions, which therefore implied a stronger connection with the external academic communities and to their academic disciplines, and did not believe there was a high priority for institutional or student involvement in the community.

In both HERI datasets, the belief that many courses at their institutions involved community service had the most significant and positive relationship to faculty using service-learning. The second strongest predictive variable was the personal goal of preparing undergraduate students for responsible citizenship. At the same time, a very high percentage of service-learning faculty wanted to encourage their students to find ways to apply the knowledge they gained in their courses to other experiential learning opportunities, such as internships, that further enhanced their learning experience and prepared them for success after college. This factor was found in the FSSE dataset, and was the second highest predictive variable overall in the third hypothesis.

Reforming faculty roles and rewards was the weakest but still positive factor relating to the use of service-learning. Based on the results in the third hypothesis, it can be expected that, to increase service-learning use at colleges and universities, institutional and academic leaders should focus more on the perception of the prevalence of service-learning activities and on relating these activities to the institutional mission and goals to prepare students for civic engagement.
In conclusion, it can be said that the second and third hypotheses were better at identifying the determinants relating to faculty who did and did not use service-learning than the first hypothesis. The dependent variables that focused on including service-learning in academic courses in the second HERI dataset and the FSSE dataset were also better for determining faculty use of service-learning than the dependent variable that asked if the respondents taught a service-learning course in the last two years in the first HERI dataset.

Two of the three most significant and positive relationships between faculty and service-learning use were in the second HERI dataset. These variables were found in the second and third hypotheses. The first predictive variable of significance was faculty participating in community or public service each week, and the second was their belief that many courses at their institution involved community service. The other variable that was most significantly and positively related to service-learning was the option to include experiential activities in classes. While the percentage of service-learning faculty who responded positively to these questions (32.6%, 38.0% and 47.2% respectively) might not be that much greater than the overall average of service-learning faculty, their level of significance calls for more attention to areas that are not often analyzed in research on faculty. Sociodemographic, academic and institutional factors, on the other hand, contributed less to our understanding of faculty who did and did not use service-learning than the predictive variables relating to workload, work preference, personal beliefs, and institutional cultural factors.
CHAPTER V: CONCLUSIONS AND IMPLICATIONS

In the past decade, there has been a growing movement toward conducting research on faculty and their use of service-learning. These studies generally looked at either subsets of the faculty, such as by academic disciplines that represent specific areas of academia, or focused on only sociodemographic and academic characteristics. This study attempted to fill the gap in the research by examining a series of key determinants that could be associated with faculty use of service-learning beyond sociodemographic, academic and institutional characteristics and include faculty workload and work preference factors, and the faculty’s relationship with the institutions where they work.

The main goal of this study was to identify which factors were found to be significantly associated with faculty who included and did not include service-learning in their academic courses. From this information, institutional and academic leaders could develop ways to target certain groups of faculty to encourage them to use service-learning. They could provide rewards and recognition for such work, or put effort into changing the institutional culture to be more open to this student-centered pedagogy. Serving as a basis for discussion, the leaders could also use the results to address broader faculty issues relating to teaching, research and service with service-learning activities.

The primary research questions that guided the analyses in this study included:

1. What is the percentage of faculty at four-year institutions of higher education who include and do not include a service-learning component in their academic credit-bearing courses?
2. How do sociodemographic and academic characteristics, workload issues, and institutional factors, as perceived by faculty, predict the likelihood that faculty are using service-learning?

These questions were used to frame three hypotheses. The first hypothesis was that the faculty’s use of service-learning in academic courses was related to sociodemographic, academic and
institutional characteristics. The second hypothesis was that the inclusion of service-learning in a course could be related to the faculty's focus on teaching, research and service, with the expectation that service-learning faculty reported more of a teaching orientation than a research focus. The third hypothesis was that faculty with a more “local” commitment to their institution and its internal academic community were more likely to incorporate service-learning into their courses than those who had a “cosmopolitan” focus with their community of peers being formed externally and through their academic discipline (Gouldner, 1958).

The conceptual framework for this study was developed from the Blackburn and Lawrence’s (1995) “properties of the individual” model and Antonio, Astin and Cress’ (2000) model that focused on faculty attitudes and behaviors as they related to community service, when controlling for several sociodemographic, academic and institutional characteristics.

Two national faculty survey datasets were obtained for this study in order to compare the users and non-users of service-learning, based on a series of independent variables using a logistic regression model for the data analysis. The two datasets were the 2003 Faculty Survey of Student Engagement (FSSE) from the Center for Postsecondary Research at Indiana University Bloomington and the 2001 HERI Faculty Survey from the Higher Education Research Institute (HERI) at University of California, Los Angeles. Both surveys were designed to collect from faculty, at all types of institutions of higher education, information about their sociodemographic and academic characteristics, their work, and their attitudes and perceptions regarding their work and their institutions. Three dependent variables were selected, two from the HERI dataset and one from the FSSE dataset, to represent the different ways that service-learning was defined. As a result, three separate datasets were created for the data analysis.
Based on the conceptual model developed for this study, the data from the three datasets were first analyzed using cross-tabulations to identify patterns and trends among and within independent variables to determine which may be the best options to use in a logistic regression model where the dependent variables are categorical (Foster, et al., 2006; Nolan & Heinzen, 2008). The logistic regression analysis was then conducted to determine the odds that faculty would incorporate service-learning into their courses.

This chapter first briefly summarizes the findings presented in Chapter IV, and then discusses the implications for policy and practice, as well as for future research.

**Findings and Conclusions**

In general, this study found that the greater the commitment to service-learning, as demonstrated in the way it was defined in the dependent variable, the more likely faculty reported that they used service-learning. If professors found value in using this pedagogy, it was expected that more faculty would want to share their experience with their peers. The interest in discussing their use of service-learning may be connected to efforts at colleges and universities, and through academic disciplines and professional journals, to have faculty promote service-learning. There are several key findings that have been identified as a result of both the descriptive analysis that identified trends in service-learning use and the logistic regression analysis that determined which factors were associated more with service-learning faculty and which factors may be more likely to describe faculty who did not use service-learning.

The first hypothesis attempted to link service-learning with sociodemographic, academic and institutional characteristics. The results confirmed that more women and minorities used service-learning, although only gender attained statistical significance. The higher percentage of female faculty who used service-learning was consistent with the findings in many other studies
(Abes, et al., 2002; Antonio, et al., 2000; Banerjee & Hausafus, 2007; Hammond, 1994; Lindholm, et al., 2002; Lindholm, et al., 2005). An analysis of academic status variables was inconclusive, even though a few patterns emerged, including the high percentage of Associate Professors using service-learning and the low percentage of Professors using it. Faculty from across all disciplines used service-learning, with those in the Professional, Business and Education disciplines reported the highest use, and those in the Arts and Humanities and in the Science and Engineering fields used it to a lesser degree. The type of institution where faculty worked had minimal association with the use of service-learning. Overall, the analysis of the three datasets in this study did not fully support the first hypothesis for all the determinants included. Gender was the only variable that did confirm the first hypothesis, while the others showed little or no association. These results were similar to the study done by Abes and her colleagues (2002), but different from the Banerjee and Hausafus (2007) study.

The second hypothesis focused on the use of service-learning as it related to the faculty tripartite, with the expectation that service-learning faculty would have a teaching orientation and non-service-learning faculty would have a research orientation. The results showed that service-learning was closely associated with faculty who had a primary interest in teaching and who made student-centered pedagogical choices for their courses. These findings are similar to the ones reported by Antonio, Astin and Cress (2000), Banerjee and Hausafus (2007), Cantor (1995), and Dicklitch (2005). Service-learning faculty included undergraduates in their research, and they themselves performed community or public service each week. Non-service-learning faculty preferred research more than teaching and service, and used more traditional pedagogies in their courses. These results are consistent with what Lindholm and her colleagues (2002) reported.
The third hypothesis attempted to make connections between personal preferences, institutional cultural characteristics and the use of service-learning. The results of this study highlighted the strong commitment that service-learning faculty had to their institutions, as well as their belief that many courses at their institutions involved students in community service. There was a high priority at their institutions to help students learn how to bring about change in society. Institutional culture and priorities further support the explanation of why some professors were more likely to join their colleagues in using service-learning, and others were not. Lindholm and her associates (2002) found comparable results in their study that used the same HERI dataset. These findings are also related to Blackburn and Lawrence’s (1995) social knowledge construct, where the choices professors make in their courses and how they allocate their time to the different components of the faculty tripartite could be related to their perceptions about their work environment.

In addition, how connected the faculty were to the institutional culture and priorities where they worked help to explain why some professors were more likely to join their colleagues in using service-learning, and others were not. This was supported by their belief that colleges should be involved in solving social problems. Non-service-learning faculty tended to be less involved in their institutions, and did not believe there was a high priority for institutional or student involvement in the community. These results were similar to the way that Gouldner (1958) differentiated the types of faculty based on their relationship with the colleges and universities where they worked.

In summary, the second and third hypotheses were better than the first hypothesis at identifying the determinants relating to faculty who used and did not use service-learning in their academic courses.
Implications for Policy and Practice

This study provides better insight into a series of factors that are associated with faculty who used or did not use service-learning. Many of the recommendations that follow are consistent with the results found by Hinck and Brandell (2000) in their study of faculty and service-learning, as outlined in the literature review.

Overall, it is critical to have a common definition for service-learning, especially when collecting and analyzing data on faculty involvement in this instructional method. First, a common definition enables faculty to share instructional techniques, experiences and outcomes of student learning. It forms a basis for determining the impact on, and value of, the service-learning experience for faculty, students, the community, and their institutions. A common definition enables researchers to better determine how faculty allocate their time and resources, as a basis for academic and institutional leaders to develop policies and procedures for supporting such activities. Without a universal definition at the institutional level and across the academic disciplines, the implementation, expansion and institutionalization of, and recognition for, service-learning continues to be a challenge.

As a newer form of experiential education, it is critical to have a common definition of what service-learning is, and is not, when directing resources to institutionalizing service-learning at colleges or universities or providing faculty resources through the academic disciplines. One option is to use the service-learning course review plan and matrix developed by the Faculty Policy Committee on Service-Learning at the University of California at Berkeley ("Criteria for service-learning course review at UC Berkeley," 2002; Service-learning course criteria," 2002).
Efforts to institutionalize service-learning require a self-assessment and comprehensive plan that focuses on the philosophy and mission of service-learning, as well as faculty, student, community agency, and institutional support for and involvement in this teaching and learning tool. Furco's (2002b) self-assessment rubric for service-learning was designed for colleges and universities to implement and assess their success in institutionalizing service-learning. The first step in this rubric is defining service-learning, which reiterates the need for a common definition that multiple stakeholders can use as a basis for all service-learning activities.

While sociodemographic, academic and institutional characteristics may not have a strong association with faculty use of service-learning in this study, it is still important to take these factors into consideration. The challenges of service-learning use, as discussed in Chapter II, need to be addressed and weighed against the benefits to faculty and students, and any resources and services provided by the institution. If university and faculty leaders would like to expand the use of service-learning on their campuses, then they need to identify what are the barriers and benefits for faculty, as well as provide support and encouragement for the continued use of this teaching and learning method.

Efforts to expand the use of service-learning should address what other mitigating forces might attract or deter faculty to participate. Policies relating to tenure and promotion should articulate how service-learning fits within, and across, the teaching, research and service components of the review guidelines. Other policies can outline teaching obligations, such as hours per week of scheduled teaching or release time available, when seeking to increase the number of faculty who could be using this student-centered pedagogy. These types of policies help to clarify what is expected of faculty, especially those in more tenuous positions, if they choose to incorporate service-learning into their courses. At the same time, the expansion of
service-learning to include more tenured faculty requires identifying senior faculty who are currently using service-learning to actively encourage others to use it, as well as to design faculty development initiatives and advocate for a shift in the reward structure that offers incentives (i.e., stipends, release time, tenure and promotion guidelines, etc.) for participation.

In addition to setting policies, it is just as important to establish resources and services to support faculty using service-learning. Establishing an office of service-learning is one of the most visible ways an institution can demonstrate commitment. Other ways include providing logistical support, publishing guidelines and sample syllabi to show service-learning and non-service-learning faculty how to use the pedagogy, incorporate it into all areas of the faculty tripartite, and demonstrate the benefits to participation.

Institutional policies and practices relating to faculty workload and work preferences may need to be modified and implemented before more faculty are willing to incorporate service-learning into their courses on an ongoing basis. These policies and practices should focus on what are the benefits to the faculty before concentrating on student learning objectives and outcomes or fulfilling the institutional goals to provide service to the community. Since service-learning faculty tend to teach more and have a primary interest in teaching, then it is important to establish tenure and promotion guidelines that give different weights to teaching and service, as well as recognize its inclusion in research activities and publications dedicated to service-learning. A commitment to teaching was also found in Hammond’s (1994) study. These policies may also encourage more faculty to embrace this student-centered pedagogy, as also noted in the study conducted by Abes and her associates (2002). Institutions can provide faculty development workshops to not only introduce service-learning to non-service-learning faculty, but also to show them successful models for incorporating service-learning into their courses in
an academically rigorous way that matches their views of more traditional teaching methodologies, and for having undergraduates involved in faculty research. In general, faculty need to see how the benefits can outweigh the barriers to incorporating service-learning into their academic courses before more choose to use it.

Institutions that have made it a priority to expand service-learning on campus need to consider what changes to the institutional and faculty values, behaviors and attitudes should be made, too (Green, 1990). The expansion of service-learning requires a review of the institutional mission, goals and culture to insure that there is consistency among these areas. It is not enough to have service to the community or to prepare students to become leaders in their society in the institutional mission statement; it also needs to be part of the institutional and faculty culture. Many service-learning faculty in this study already believed that there was a high priority for their institutions to be involved in the community, and for their students to learn how to bring about change in society. They also believed that many courses on their campuses included service-learning. Institutions can build on these perceptions to support and expand the culture of linking academics and service along with involvement in the community.

Strong and visible academic and administrative support at all levels, from the department chair to the president, is required. A visible sign of institutional support would be to have an office of service-learning with a tenured professor appointed as director. This placement would give this pedagogy more credibility as an academic initiative, even with community involvement and student focus (Hinck & Brandell, 2000). The office should include administrators and staff providing logistical support to faculty, while enabling the director to devote time to pursuing research interests and meeting teaching obligations. The office of service-learning is in a strategic position to promote faculty and service-learning through a formal recognition system
that publically highlights the accomplishments of both faculty and students and promotes the informal network of faculty who favor sharing with peers their service-learning experiences.

In summary, service-learning can be expanded on university and college campuses, as long as the institutional and faculty leadership understand that this student-centered pedagogy is not only about serving the community, but also about preparing students to be informed leaders. This study showed that it is more important to find ways to encourage faculty to participate in a meaningful and rewarding way that enhances their teaching experience and their students’ learning accomplishments, as well as to support their research efforts and recognize their service to the community.

**Implications for Future Research**

The research findings in this study, coupled with the studies reviewed in Chapter II, suggest that educational researchers need to conduct more research on faculty and their use of service-learning. This study confirmed that results vary, depending on how the dependent variable is phrased due to the multiple service-learning definitions and interpretations that exist. The analysis of the three datasets showed that the more closely the dependent variables were associated with service-learning use, the greater the percentage of faculty who responded positively to using this student-centered pedagogy in this study. While about one fifth of all faculty had tried teaching a service-learning course within a two-year period, one third to one quarter had incorporated service-learning into their courses and had chosen to tell their peers about the experience. Future research should carefully look at how service-learning is defined, and determine if it is clearly articulated in the research instruments to ensure that they are all interpreting it the same way.
Future studies should include elements of the two models that were integrated to become the conceptual framework for this study. When combined, they enabled this researcher to go beyond identifying the percentage of faculty who used and did not use service-learning, based on fixed variables like the sociodemographic characteristics, to consider why faculty were using it and what other personal and institutional factors might be more strongly associated with the use of service-learning. Sociodemographic, academic and institutional factors contributed less to our understanding of faculty who did and did not use service-learning, than did the predictive variables relating to workload, work preference, personal beliefs, and institutional cultural factors. Both Blackburn and Lawrence (1995) and Biglan (1973) cited the importance of conducting research about faculty issues within the context of multiple variables, so as to not over generalize the results at the institutional level and for all faculty. The pedagogical choices faculty made were the most significant predictive variables in this study and point to the need to focus more on how faculty structure their courses. Knowing more about this finding can be used as a foundation for determining how best to expand service-learning use and address any benefits or barriers that might appear. The model created for this study is also readily applicable for future research in the field, which can further explore the relationship between institutional mission and the university-community relationship after gaining a better understanding of the faculty role in service-learning initiatives that are offered by this study.

This study confirms that future research is needed to determine if the results found here can be duplicated using more recent datasets created by FSSE and HERI or can be applied to larger groups of faculty (Foster, et al., 2006). Additional data analyses with more recent versions of these two datasets may provide longitudinal results that show how the association between service-learning use and the predictive variables has changed or remained constant over time.
Future research can also incorporate the additional composite variables included in Antonio, Astin and Cress's (2000) study, such as faculty socialization starting with graduate school and identifying institutional characteristics, and the “properties of the environment” variables found in Blackburn and Lawrence’s (1995) conceptual framework, if such variables are included in future datasets. Faculty socialization could be an important variable, since there is a chance that the junior faculty had been exposed to service-learning as part of either their undergraduate or graduate experiences.

If the FSSE and HERI datasets are used again in a single study, it is important to determine the possibility of weighing the FSSE data in order to create a national norm of faculty at American colleges and universities. The value of determining the national norms using both datasets is that the results could then be applied more easily and broadly across the higher education community.

With the increase of women at all academic ranks and as their leadership roles increase, more research is needed to further explain why they are more likely to use service-learning than men. Possible reasons for gender to be the only significant sociodemographic characteristic in this study should be explored in future studies.

Additional research should be conducted to analyze whether there is an interaction affect between the faculty workload and work preference variables and the personal and institutional factors found in the second and third hypotheses with the sociodemographic, academic and institutional characteristics found in the first hypothesis and the use of service-learning (Foster, et al., 2006). This can be done, either with the two datasets obtained for this study, or with more recently produced HERI and FSSE datasets. For instance, it would be noteworthy to identify the percentage of faculty within different academic discipline groups who work with undergraduates
on research outside of class and used service-learning in their courses to determine the level of significance of this three-way statistical association. It may also be possible for future research to provide more information about the relationship between academic status and the personal and institutional culture factors, based on whether the faculty's place within the academic hierarchy can be associated with their use of service-learning. Stanton (1994) believed that academic status was a stronger variable than institutional type in determining the likelihood that faculty would use service-learning. He also wrote that the institutional culture, such as one that is perceived to value teaching, can have a positive effect on faculty involvement in teaching initiatives, and that this is more often a function at public universities and private liberal arts colleges. The results from this study are similar to what Rothman, Anderson and Schaffer (1998) and Furco (2001) found in that faculty are less likely to use service-learning within the institutional culture of a research university that emphasizes research over teaching. Academic disciplines can be grouped in various ways, such as the method designed by Biglan (1973), to differentiate the disciplines based on operational measures of social connectedness and the level of commitment. While the Education disciplines are grouped with the Professional and Business disciplines in this study, it would be interesting to see what happens when Education is grouped with the Social Science disciplines or even analyzed as its own category.

Another research option is to conduct a more comprehensive look at types of institutions and consider including a third category for metropolitan universities, which focus on social justice and civic engagement and are more invested in their diverse and often urban communities (Martin & Samels, 2006). This would be possible if the Carnegie Classification of Institutions of Higher Education's (2010) community engagement elective classification option was added to the institutional variable options in the research instruments and datasets.
Additional research should build on the results found in this study to investigate how to capitalize on the benefits of service-learning for faculty, and to address the barriers to its incorporation in academic courses. Such benefits could be the blending of teaching, research and service activities in response to the faculty’s working more hours per week to meet the requirements for tenure and promotion, as reported by Bloomgarden and O’Meara (2007). Some institutions, like Michigan State University, have been on the forefront of restructuring their promotion and tenure guidelines to include outreach that “involves generating, transmitting, applying, and preserving knowledge for the direct benefit of external audiences in ways that are consistent with university and unit missions” (Rothman, et al., 1998, p. 107). Research can be conducted to assess the success of overcoming deterrents to implementing service-learning through the implementation of faculty development initiatives or changes in the faculty reward structure.

Finally, a follow-up study could be conducted using a qualitative approach to gathering data that provides additional insight into why certain groups of faculty are using service-learning and others are not. This could be accomplished by selecting a representative sample of the service-learning and non-service-learning faculty and interviewing them to determine if further patterns of variation among, and within, institutions and academic fields can be associated with the use of service-learning.

Determining how prevalent the use of service-learning is on college and university campuses is valuable for many reasons, including how faculty allocate their work and their pedagogical preferences. Research on service-learning can also provide insight into how pedagogical choices can be associated with the extent to which faculty interact with their institutions and their decisions to be actively engaged in its culture, or to focus their attention on
activities that provide personal satisfaction even if the formal reward structure emphasizes other areas of workload and outcomes. Strategies to increase faculty use of service-learning and to institutionalize the pedagogy into the academic culture needs to be based on results found in research such as this study, to further explain the future of service-learning and its value to the faculty.
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## Appendix A: Comparison of Existing Conceptual Frameworks

<table>
<thead>
<tr>
<th>My Conceptual Framework</th>
<th>Items that relate to Blackburn &amp; Lawrence's conceptual framework</th>
<th>Items that relate to Antonio, Astin &amp; Cress's conceptual framework</th>
<th>Original 2003 FSSE Survey Codes</th>
<th>Original 2001 HERI Faculty Survey Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variables</strong></td>
<td></td>
<td></td>
<td>FCOMMPRO</td>
<td>TCHACT06, INSUSE15</td>
</tr>
<tr>
<td>Who are the faculty?</td>
<td></td>
<td></td>
<td>FSEX, RACE, RANK, APDISCOD, CARN2000, PRIVATE</td>
<td>SEX, RACE1, ACADRANK, DEPTD, STRAT</td>
</tr>
<tr>
<td>Hypothesis #1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
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<td></td>
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<tr>
<td>Race</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic Status</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Academic Discipline</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Institutional Type</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Service-learning and</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>faculty workload issues</td>
<td></td>
<td></td>
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<tr>
<td>Hypothesis #2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary focus – teaching</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>or research</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching and service</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>orientation versus the</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>research orientation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty workload</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>(hours/week)</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**Sociodemographic construct: Gender**
- Demographic measurements (gender)
- Professional measurements (academic rank)
- Institutional type

**Career construct: rank, discipline, institutional type**
- Self-knowledge construct: level of engagement in and personal attitudes and values toward different faculty roles
- Professional measurements (teaching orientation)
- Personal commitment to community service (hours/week spent on community/public service)
- Attitudinal/Values measurement: Intellectual career orientation (opportunities for research) and Service career orientation (opportunities to influence social change and for teaching)
- Student-centered pedagogy (experiential learning) or traditional pedagogy (lecture)
<table>
<thead>
<tr>
<th>My Conceptual Framework</th>
<th>Items that relate to Blackburn &amp; Lawrence’s conceptual framework</th>
<th>Items that relate to Antonio, Astin &amp; Cress’s conceptual framework</th>
<th>Original 2003 FSSE Survey Codes</th>
<th>Original 2001 HERI Faculty Survey Codes</th>
</tr>
</thead>
</table>

**Service-learning, faculty and their institutions (Hypothesis #3)**

- Personal level of involvement in institutional reform
- Personal commitment to students becoming responsible citizens
- Value of feedback from colleagues on teaching and research
- Institutional commitment and involvement in solving social problems and community service
- Perception about how many courses involve service-learning
- Self-knowledge construct: level of engagement in and personal attitudes and values toward different faculty roles;
- Social Knowledge construct: the individual’s view of and relationship with his institution
- Personal commitment to community service (Prepare undergraduate students for responsible citizenship)
- Humanistic orientation (influencing social change)
- Status orientation (obtaining recognition from colleagues)
- Colleges and service opinion (College should be involved in solving social problems)
- Institutional commitment to community service (many courses involve community service; teach students how to change society)
- FIMPRES
- FINTERN
- REFORM1
- REFORM3
- INSOPN16
- INSOPN17
- UGGOAL12
- GENOPN05
- INSOPN12
- INSPIRI06
### Appendix B: Independent Variables

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Label</th>
<th>Description</th>
<th>Original Code</th>
</tr>
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<td><strong>FSSE DV3 DATA</strong></td>
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<td></td>
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</tr>
<tr>
<td><strong>Dependent Variable</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FCOMMPRO2B</td>
<td>Participate in a community-based project as part of your selected course</td>
<td>0=No and 1=Yes</td>
<td>FCOMMPRO</td>
</tr>
<tr>
<td><strong>Hypothesis #1</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APDISCOD2</td>
<td>General discipline of your academic appointment</td>
<td>Apdiscod2SnE: 0=Not Science and Engineering; 1=Science and Engineering Apdiscod2PBnE: 0=Not Professional, Business and Education; 1=Professional, Business and Education Apdiscod2SS: 0=Not Social Science; 1=Social Science Apdiscod2Other: 0=Not Other; 1=Other</td>
<td>APDISCOD</td>
</tr>
<tr>
<td>CARN2000B</td>
<td>University or 4-year institution</td>
<td>0=Universities; 1=4-year institutions</td>
<td>CARN2000</td>
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<tr>
<td>PRIVATE2</td>
<td>Public or Private institution</td>
<td>0=Public; 1=Private</td>
<td>PRIVATE</td>
</tr>
<tr>
<td>FSEX2</td>
<td>Gender</td>
<td>0=Male and 1=Female</td>
<td>FSEX</td>
</tr>
<tr>
<td>RACE2</td>
<td>Race/Ethnicity</td>
<td>0=White/Caucasian; 1=Racial/Ethnic Minority</td>
<td>RACE</td>
</tr>
<tr>
<td>RANK2</td>
<td>Academic status</td>
<td>Rank2bPROF: 0=Not a Professor; 1=Professor Rank2bASSOC: 0=Not an Associate Professor; 1=Associate Professor Rank2bOTHER: 0=Not Other, 1=Other (including lecturer and instructor)</td>
<td>RANK</td>
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</table>

Note: Arts and Humanities is the reference group.
<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Label</th>
<th>Description</th>
<th>Original Code</th>
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<tr>
<td><strong>Hypothesis #2</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>FRESEARC2</td>
<td>Working with undergraduates on research</td>
<td>0=No; 1=Yes</td>
<td>FRESEARC</td>
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<tr>
<td>UGTEACH2</td>
<td>Hours per week teaching undergraduate students</td>
<td>0=Low load (8 hours or less); 1=High load (9 or more hours)</td>
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<tr>
<td>LECTURE2</td>
<td>Percentage of class time spent on lecturing</td>
<td>0=0-49%; 1=50% or more</td>
<td>LECTURE</td>
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<tr>
<td>EXPERIENC2</td>
<td>Class time included experiential activities (labs, field work, etc.)</td>
<td>0=No; 1=Yes</td>
<td>EXPERIEN</td>
</tr>
<tr>
<td>FGNPROBS2</td>
<td>To what extent do you structure your selected course so that students learn and develop skills on solving complex real-world problems</td>
<td>0=very little/some; 1=quite a bit/very much</td>
<td>FGNPROBS</td>
</tr>
<tr>
<td><strong>Hypothesis #3</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>FIMPRES2</td>
<td>Level of importance that you place on undergraduates at your institution having the experience of working on a research project with faculty outside of course program requirements</td>
<td>0=Not/somewhat important; 1=important/very important</td>
<td>FIMPRES</td>
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<tr>
<td>FINTERN2</td>
<td>Level of importance that you place on undergraduates at your institution having a practicum, internship, field experience, co-op experience</td>
<td>0=Not/somewhat important; 1=important/very important</td>
<td>FINTERN</td>
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<tr>
<td>Variable Name</td>
<td>Label</td>
<td>Description</td>
<td>Original Code</td>
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<td>HERI DV1 and HERI DV2 DATA</td>
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**Dependent Variables**

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<th>Variable Name</th>
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<tbody>
<tr>
<td>TCHACT06B</td>
<td>Taught a service-learning</td>
<td>0=No and 1=Yes.</td>
</tr>
<tr>
<td></td>
<td>course in last two years</td>
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<tr>
<td>INSUSE15B</td>
<td>Do any of your courses</td>
<td>0=No and 1=Yes</td>
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<tr>
<td></td>
<td>include the following</td>
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<tr>
<td></td>
<td>instructional method:</td>
<td>Community service as part of coursework</td>
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</tbody>
</table>

**Hypothesis #1**

<table>
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<th>Variable Name</th>
<th>Label</th>
<th>Description</th>
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<td>ACADRANK2</td>
<td>Academic status</td>
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<tr>
<td></td>
<td></td>
<td>Acadrank2PROF: 0=Not a Professor; 1=Professor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acadrank2ASSOC: 0=Not an Associate Professor; 1=Associate Professor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acadrank2OTHER: 0=Not Other; 1=Other (including lecturer and instructor)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: Assistant Professor is the reference group.</td>
</tr>
<tr>
<td>DEPTD2</td>
<td>Academic discipline</td>
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<tr>
<td></td>
<td></td>
<td>Deptd2SnE: 0=Not Science and Engineering; 1=Science and Engineering</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Deptd2PBnE: 0=Not Professional, Business and Education; 1=Professional, Business and Education</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Deptd2SS: 0=Not Social Science; 1=Social Science</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Deptd2Other: 0=Not Other; 1=Other</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: Arts and Humanities is the reference group</td>
</tr>
<tr>
<td>SEX2</td>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>RACE1B</td>
<td>Race/Ethnicity</td>
<td></td>
</tr>
<tr>
<td>STRATPRIVATE</td>
<td>Public or private institution</td>
<td></td>
</tr>
<tr>
<td>STRATUNIV4YR</td>
<td>University or 4-year</td>
<td></td>
</tr>
<tr>
<td></td>
<td>institution</td>
<td></td>
</tr>
<tr>
<td>Variable Name</td>
<td>Label</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------------------------------------------------</td>
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</tr>
<tr>
<td><strong>Hypothesis #2</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HRSPWK01B</td>
<td>Hours/Week: Scheduled teaching</td>
<td>0=Low load (8 hours or less); 1=High load (9 hours or more)</td>
</tr>
<tr>
<td>HRSPWK06B</td>
<td>Hours/Week: Research</td>
<td>0=Low load (8 hours or less); 1=High load (9 hours or more)</td>
</tr>
<tr>
<td>HRSPWK09B</td>
<td>Hours/Week: Community or Public Service (i.e., external service)</td>
<td>0=None; 1=One or more Hours</td>
</tr>
<tr>
<td>PRIMINT2</td>
<td>Primary Interest</td>
<td>0=Teaching; 1=Research</td>
</tr>
<tr>
<td><strong>Hypothesis #3</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GENOPN05B</td>
<td>General statement: College should be involved in solving social problems</td>
<td>0=Disagree; 1=Agree</td>
</tr>
<tr>
<td>INSOPN12B</td>
<td>Statement about your institution: Many courses involve students in community service</td>
<td>0=Disagree; 1=Agree</td>
</tr>
<tr>
<td>INSOPN16B</td>
<td>Statement about your institution: My research is valued by faculty in my department</td>
<td>0=Disagree; 1=Agree</td>
</tr>
<tr>
<td>INSOPN17B</td>
<td>Statement about your institution: My teaching is valued by faculty in my department</td>
<td>0=Disagree; 1=Agree</td>
</tr>
<tr>
<td>INSPRI06B</td>
<td>Priority level at your institution: Teach students how to change society (i.e., To help students learn how to bring about change in American society) at my institution</td>
<td>0=Low/medium priority; 1=High/ highest priority</td>
</tr>
<tr>
<td>REFORM1B</td>
<td>In past two years, your level of involvement in reforming overall mission, purpose</td>
<td>0=Not involved, 1=Involved</td>
</tr>
</tbody>
</table>

5 The low load in the variable hours per week: research (HRSPWK06B) includes cases where the respondent noted zero hours per week.
<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Label</th>
<th>Description</th>
<th>Original Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>REFORM3B</td>
<td>In past two years, your level of involvement in reforming faculty roles and rewards</td>
<td>0=Not involved, 1=Involved</td>
<td>REFORM3</td>
</tr>
<tr>
<td>UGGOAL12B</td>
<td>Importance to you: Prepare undergraduate students for responsible citizenship</td>
<td>0=Not/somewhat important, 1=Very important/essential</td>
<td>UGGOAL12</td>
</tr>
</tbody>
</table>
Appendix C: Hypothesis Map

Who are the faculty:
- Sociodemographic Characteristics (gender and race)
- Academic Characteristics (academic status and academic discipline)
- Institutional Characteristics (institutional type)

Service-learning, faculty and their institutions:
- Personal commitment to academic and external communities
- Institutional commitment to academic and external communities
- Relationship between faculty and their institutions

Service-learning and faculty workload issues:
- Primary interest (teaching or research)
- Faculty workload (hours/week)
- Orientation (service or intellectual)

Faculty who use and who do not use service-learning in their academic courses