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University academic professional staff: augmenting traditional faculty teaching, advising, and research roles

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University academic professional staff:
Augmenting traditional faculty teaching, advising, and research roles

by

Kevin Lee Kane

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

Major: Education (Educational Leadership)

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Ames, Iowa

2007

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ABSTRACT

The growth of the research university has had many consequences including an evolving workforce. With growth and evolution has come a need to keep faculty primarily engaged in their teaching and research roles, freeing them from other administrative burdens. To accomplish this task, the university began employing more administrators and professional staff. Over time, however, specialization and differentiation of the academic workforce have resulted in an overlap of some responsibilities between professional staff and faculty.

The purposes of this study were to develop a better understanding of the roles and responsibilities of professional staff, especially those who have become involved in the academic mission at American research universities, and to reveal the degree to which these roles overlap with the roles and responsibilities of faculty. The importance of this study lies in using this new understanding to most effectively employ academic professional staff for the overall excellence of the university they serve.

As part of the study, questions were asked about roles, characteristics, and careers of academic professionals in a research university and where these roles overlapped with faculty. The study used both secondary data analysis and survey methodology; Iowa State University served as the case study. A survey of 2,449 professional staff resulted in a response rate of 62%. Three hundred sixty respondents met the criteria of academic professionals.

Analysis of the results show that academic professionals are involved in teaching for-credit courses, formally advising students, and performing sponsored research – criteria established as overlapping traditional faculty responsibilities. Most of the work they perform

occurs in the main academic areas of the university: centers, institutes, and colleges. Academic professionals are most likely advisors, scientists, coordinators, and research associates. They hold masters, doctorate, or professional degrees. Many are funded by research contracts and have non-tenure-eligible faculty rank. They spend significant amounts of time working with faculty including having a faculty supervisor. Career planning brought them to the university to be involved in the academic mission.

The findings of this inquiry have the potential to assist university decision makers in framing and answering challenging academic, financial and cultural questions that occur as academic professionals augment traditional faculty roles within the university's academic mission.

CHAPTER 1

INTRODUCTION

Over the past 30 years, research universities have greatly expanded their missions beyond the teaching mission of the traditional American college. Clark Kerr coined the phrase “multiversity” to explain this expansion phenomenon of the contemporary research university in the early 1960s (Kerr, 1963). As the missions of our universities continued to grow and funding from state and federal sources began to shrink over time, research universities started using more non-faculty professional staff to fill the human resources needs of their expanding institutions (Liebmann, 1986; Rhoades, 2001).

During the institutional growth of the past few decades, professional staff have not only filled university service positions in student, business, facility, information technology, and other areas (including teaching and research support) (Rhoades, 1998) but also in the direct academic production of teaching and research. These responsibilities include academic advising, lab and desk research, and teaching, as well as academic service to the department, college, and university. Moving some of these traditionally faculty-related responsibilities to professional staff has saved institutions financially, enabling generally lower paid professionals to augment the work of generally higher paid faculty (Rhoades, 2001).

The resulting evolution of the academic workforce has been an increase in the number of professional staff. A subset of these staff, referred to as academic professionals in this study, have become responsible for some teaching, advising, and research work. In addition, research, student affairs, business and finance, and extension units all have become an integral part of the university alongside its longstanding teaching role. The growth of

these areas and associated need for additional human resources has, in most cases, come not at the expense of faculty, but in addition (Rhoades, 1998).

Professional staff is comprised of a variety of types of positions, including scientists, academic advisors, student counselors, health care workers, information technology professionals, business and finance professionals, and many others. These university staff members make up a large part of the contemporary research university, yet their role as a group within the university has not been studied in any significant detail (Liebmann, 1986). “Despite their significant numbers and professionalism, they lack visibility throughout the academy and have been of little concern to educational researchers” (Rosser, 2000, p. 5). Research and literature on the subgroup of academic professionals, the focus of this study, is even more rare.

While the faculty has always been tied tightly to the university’s longstanding and central mission of teaching and research, other higher education employee groups have not been viewed as mission critical, and thus, not central to measures of its production. This is one of the reasons that it is difficult to find and compile information on professional staff (Rhoades, 1998). For purposes of studying professional staff, on average one-third of employees at research universities (Rosser, 2000), it is important to distinguish and characterize the non-faculty portion of the university work force. This is especially true of the subgroup at the center of this study, academic professionals, those professional staff members involved directly in the production of teaching and research at the university.

To examine the research university’s mission in the new millennium, it is imperative to study not just the traditional faculty employee base, but also those employees who

increasingly contribute to the growth and evolution of the research university and its central missions of research, teaching, and outreach (Liebmann, 1986; Rhoades, 2001).

Purposes of the Study

The purposes of this study were to develop a better understanding of the roles and responsibilities of professional staff, especially those who have become involved in the academic mission at American research universities, and to reveal the degree to which these roles overlap with the roles and responsibilities of faculty. The importance of this study lies in using this new understanding so academic professional staff can be used most effectively for the overall excellence of the university they serve.

The characteristics of professional staff will be identified and studied in order to define and understand this group within the academic workplace and for future comparative studies. Because of the wide-ranging definitions of professional staff in the literature, a standard definition for this study is proposed. Professional staff are defined here as professionals serving the research, outreach, support, and teaching missions of the university who are not part of the tenured/tenure-eligible faculty. Academic professional staff are those professional staff members involved directly in the production of teaching and research at the university. These definitions, however, are over-simplifications and will be explained further throughout the study.

Research Questions

To address the central purpose of this study, developing an understanding of the roles and responsibilities of professional staff involved in the academic and research missions at American public research universities, several research questions were explored. Essential to the study is identifying traditional faculty roles that professional staff fill in the academic and

research areas of research universities, where they are filled, who fills them, and the characteristics of these professionals who are taking on these responsibilities. In order to address this broad question, several more specific questions were researched:

- 1) What roles and responsibilities in teaching, advising, and research overlap between professional staff and faculty at a research university?
- 2) Where in the university's colleges, departments, and/or administrative units does the overlap of professional staff and faculty responsibilities occur?
- 3) Which classifications of professional staff are most likely to be involved in the overlap of responsibilities with faculty and do these staff exhibit commonalities in demographics, job characteristics, or faculty relationships?
- 4) How did academic professionals secure their positions? Was it a matter of coincidence, a matter of deliberate career planning, or both?

Of course there are many associated issues that these four questions raise regarding the need for these positions, administrative and faculty's perspectives on these positions, and how much of the overlap is actually planned and how much evolves by chance. These issues are outside the scope of this study.

Methodological Framework

The theoretical framework of this quantitative study is that of traditional survey research, from a broad objectivism epistemology through the detailed methods of constructing, implementing, and analyzing survey data and associated secondary data sets. The theoretical framework is introduced below and will be explained in more detail in the Methodology chapter.

Methodology

The methodology for this quantitative study is descriptive research. Descriptive research involves identifying the characteristics of an observed phenomenon, in this case professional staff at a public research university. It also can be used to explore possible correlations among the phenomena being studied. The research described the situation as it existed at the time. “It does not involve changing or modifying the situation under investigation, nor is it intended to determine cause-and-effect relationships” (Leedy & Ormrod, 2005, p. 179).

Survey research. Survey research uses questionnaires (new or existing) to poll or obtain information about a selected group. In this study, professional staff were surveyed in regard to their job responsibilities and careers.

Secondary data analysis. The survey research data were combined with an existing Iowa State University Human Resources database (called the ISUHR database for this study) to obtain additional information about each respondent in the survey.

The theoretical framework of survey research in this study suggests there is information “out there” in the ranks of higher education professional staff to answer the proposed research questions. By collecting, analyzing, and interpreting the survey and secondary data and using the scientific method of deductive reasoning and the methods of descriptive research these research questions can best be answered.

Theoretical, Conceptual, and Contextual Frameworks

Several guiding conceptual and contextual frameworks have shaped this study including the concept of the “multiversity” proposed by Clark Kerr (1963) and the concept of

“responsibility accrual” advanced by Anne Miner and Suzanne Estler (1985). Each of these is introduced below and will be discussed in more detail in the literature review.

The Multiversity Concept

Clark Kerr introduced the concept of the multiversity in talks delivered on three successive days at Harvard University, known as the Godkin Lectures that were later combined into the first edition of Kerr’s *The Uses of the University* (1963). A large part of Kerr’s idea is based upon market forces which came upon universities after World War II, especially the influx of federal funding for scientific research. This opened the university wider, away from its primary focus of teaching to a three-pronged mission of research, distributing and applying the fruits of the research, and teaching. Although each of these three missions was present within the land grant universities after the Morrill Act of 1862, this new funding stream helped broaden the mission of the research university.

The reason Kerr’s idea is instrumental to this study is its approach to the “broadened” university. For the university to branch out as it did with the influx of new federal funding, new resources needed to be identified and traditional resources needed to be repurposed. No longer could the faculty take on every role within the university. Also, specialization of the disciplines continued to evolve so that some faculty became more loyal to their colleagues within their field of study than to their university colleagues outside of their disciplines. Birnbaum describes this trend as the concept of “cosmopolitans and locals” (1988, p. 19). These forces combined to the point where voids of role and responsibility within the faculty had to be filled. Professional staff responsibilities evolved to fill these voids and also began to fill new roles that the multiversity introduced. This idea of the expansion of

responsibilities across the university and the need for new staff to fill these roles is a central theme throughout this study.

Responsibility Accrual Concept

Another concept that frames this study, and is related contextually to the multiversity concept, is that of responsibility accrual. The concept of responsibility accrual (Miner & Estler, 1985) posits that jobs (in this specific case in higher education) evolve when an “employee accrues responsibility and/or knowledge well beyond normal growth in the job. Essentially a new position is developed, which may then be formally acknowledged by the institution” (Miner & Estler, p. 121). While Miner and Estler proposed this idea at the individual job level, this study postulates that this concept can be expanded to a group of jobs and thus guides this research.

As research universities have grown into multiversities needs have emerged that could not, or would not, be filled by existing faculty. Thus, a void was created where support staff slowly began to provide the needed services for the growing university – their jobs changing to meet those needs. This evolution can help explain the growth of professional staff and academic professionals individually and as groups over time.

Significance of the Study

As the missions of our public research universities continue to expand while funding from state and federal sources continues to shrink, the burden placed upon managing the institution’s human resources continues to be a preeminent issue to the administrators of these institutions (Rhoades, 2001). Questions such as “How can we serve the same number of students with fewer dollars?” are commonplace for university decision makers around the country.

The past few decades have shown that answers to these questions, whether formally planned for or not, include having professional staff augment some duties of the faculty. These duties have included such responsibilities as academic advising, research, and teaching. Helping serve these traditionally faculty related responsibilities has saved the university financially by having generally lower paid professionals complementing the work of generally higher paid faculty. The result is an increase of professional staff involved in academic and research activities while saving the university money. Adding staff in non-academic professional positions shows a clear picture of the increasing number of professional staff serving the growing needs of the university (Rhoades, 2001).

The significance of this study is providing an understanding of professional staff, focusing on those whose academic duties have historically been assigned to faculty at the research university. This knowledge will better allow university decision makers to frame and answer challenging academic, financial and cultural questions that occur as academic professionals augment traditional faculty roles within the university's academic mission.

Research Contributions to Knowledge and Practice

As stated earlier, there is a great deal of information in higher education literature on the work life of faculty and administrators at research universities (Rosser, 2004). However, the same cannot be said for professional staff, especially those involved directly with teaching and research. Because of the increasing role in academics by professional staff in higher education, especially teaching, advising, and research, a need has emerged that demands closer study of this classification of higher education employees.

One of the goals of this study is to contribute to the body of knowledge in the discipline of higher education. Determining the underlying structure of professional staff

who do academic and research work at the research university is only the first step of what could lead to important findings toward the proper balance of human resources for the academic workplace. These positions include administration, faculty, professional staff (including academic professionals), classified staff, and graduate and undergraduate student employees (Iowa State University, 2007).

These findings should be especially useful for higher education administrators who must make staffing decisions, and for faculty colleagues of these academic professionals working toward the same academic goals. Academic professional staff also should find this study useful since currently there is no structured professional development process to prepare them for careers in the academic mission of the university. Once only faculty, tutored through the academic guild of graduate student and mentee, junior faculty, and tenured faculty member, carried out the teaching and research missions of the university. With the expanding role of academic professional staff in research and teaching, more professional development opportunities outside of the faculty development system must be created.

General Limitations

This study is limited to professional staff at a public, research university, focusing on those serving the direct teaching and research missions of the university. These professionals may also have faculty status in the non-tenure-eligible ranks (lecturer, clinician, adjunct professor in the case of Iowa State University). With this focus in mind, however, an understanding of the roles and responsibilities of tenured/tenure-eligible faculty is important because of the overlap of roles and responsibilities of these two groups (Iowa State

University, 2007). This study will not, however, delve deeply into a description of tenured/tenure-eligible faculty roles and responsibilities except where overlap occurs.

A further limitation is that the primary data collected for this study will be from one research institution, Iowa State University. While Iowa State can be viewed as fairly representative in terms of its reliance on numbers of professional staff to carry out its mission (Kane, 2004), it is the only university where professional staff were surveyed for the study. For findings to be broadly applicable, future studies should replicate this effort at other public research universities.

A last limitation discussed for this study is that of researcher bias. The author of this study is currently a member of the professional staff at Iowa State University, more specifically an academic professional, the group on which this study focuses. He has been a leader in the governance of this group and has been the spokesperson for this group to university administration. There is no denying his interest and advocacy for this group of university employees. In theory, the quantitative lens through which this research is undertaken answers any questions about objectivity. However, it is important that the reader understand the background of the author so that any perceptions of a hidden agenda are quelled from the beginning.

To reduce researcher bias and any perceptions based on bias, the author has taken very seriously the vetting of this study looking specifically for areas in which reviewers encounter investigator partiality. It is extremely important for the sake of continuing research on this important university employee group that initial studies have as little researcher bias as possible.

In addition to these limitations, limitations encountered in the research methodology are discussed in more detail in chapter three. However, despite the potential limitations outlined here and in the methodologies section, every possible strategy to negate or eliminate these limitations or biases has been taken in planning, implementing, analyzing, and sharing this research.

Discussion of Terms

The most important definitions addressed in this study are those that deal directly with the focus of the research, professional staff and academic professionals. In the review of literature, and indeed any resource dealing with university personnel and infrastructure, there is a substantial number and wide assortment of terms for “professional staff.” Some of these definitions fit rather well to the subjects who are central to this study. Many, however, are larger groupings in which the participants of this study form a subset.

Employee Classifications in Higher Education

In the search for comparisons of academic university employee classifications, the University of Arizona was chosen because it is a peer research university to Iowa State University, its employee organization structure stood out as one that was relatively easy to understand, and its employee classifications are similar to Iowa State. The employee classifications for both the University of Arizona (2005) and Iowa State University (2007) are included in Appendix B for comparison. Figure 1.1 visually depicts how these terms and categories compare and where the research focus of this study lies within these classifications.

Professional Staff		Faculty		
Professional - "Non-academic"	Professional - "Academic" No faculty rank	Professional - "Academic" Non- tenure-eligible	Non-tenure- eligible	Tenured/tenure- eligible
	Research Focus			

Figure 1.1. Classifications of university staff with academic focus.

Presented below are many of the synonymous terms found in the literature search (with references) along with how these terms relate to the participants of this study.

Professional staff: Academic or nonacademic support personnel within the structure of higher education organizations. Usually, they are not classified as faculty but rather as a non-classified, non-contract group of administrative staff (Rosser, 2000). Rosser's terminology for this group is "Midlevel Administrators" but here includes all staff members fitting the above definition whether they are considered lower, mid, or upper level. This group also includes professional staff with non-tenure-eligible (NTE) faculty rank. In the University of Arizona system, academic professionals, service professionals (or non-academic professionals in this study), and NTE faculty would make up this group (University of Arizona, 2005).

Academic professionals: A subgroup of "professional staff," this group supports the academic mission of the university by supplying teaching and research products and services directly. This group is defined as:

“ non-classified employees involved with research or teaching programs who require professional and intellectual freedom, including librarians, cooperative extensionists, scientists, and researchers. Appointments may be continuing eligible, continuing or

year-to-year and are subject to Arizona Board of Regents (ABOR) policy, Chapter 6-301” (University of Arizona, 2005).

This group is the central focus of this study.

Faculty: For this study, faculty are defined as both the tenure/tenure-eligible faculty (abbreviated when needed as TTE faculty) and the non-tenure-eligible faculty (abbreviated as NTE faculty). Where only the term faculty is used it refers to both TTE and NTE faculty.

It should be noted that, in addition to the terms that have been standardized for this study, there are many more terms in the literature that try to describe the professional staff category studied here. Some of these include “collegiate middle-managers” (Scott, 1980), “midlevel leaders” and “midlevel administrators” (Rosser, 2000).

Professional Staff and Faculty Responsibility Overlap

Equally important to this study after defining employee classifications is to compare where the professional staff classification and faculty classifications overlap. While the focus of this study is to find this intersection quantitatively in the data analysis, it is helpful to visually show this overlap here in the introduction to the study. While Figure 1.1 shows a simplified depiction of how these two classifications sit side by side, Figure 1.2 shows a better view of how these employee classifications have traditionally interacted within a public research university, with very defined and hard boundaries.

Figure 1.3 portrays a more accurate view of the current situation with the overlap of professional staff and faculty responsibilities where “academic professionals” are augmenting traditional faculty roles and responsibilities in teaching, research, and

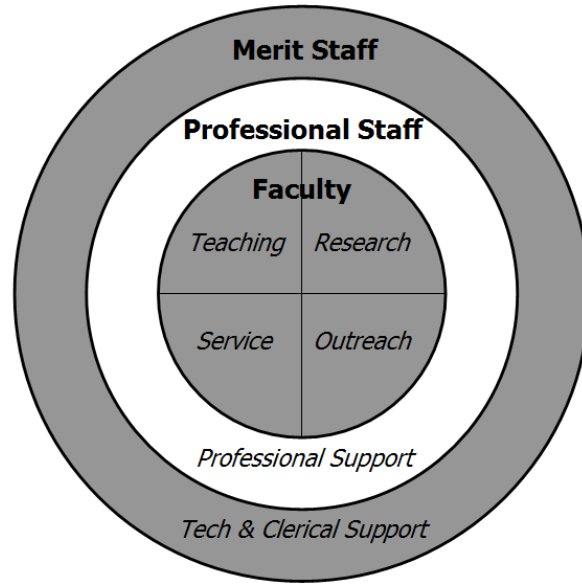


Figure 1.2. Employee classifications in the traditional function and responsibilities model.

advising – some with faculty rank and some without. The figure shows that in all three large employee groups, merit, professional, and faculty, there has been a blurring at the lines from

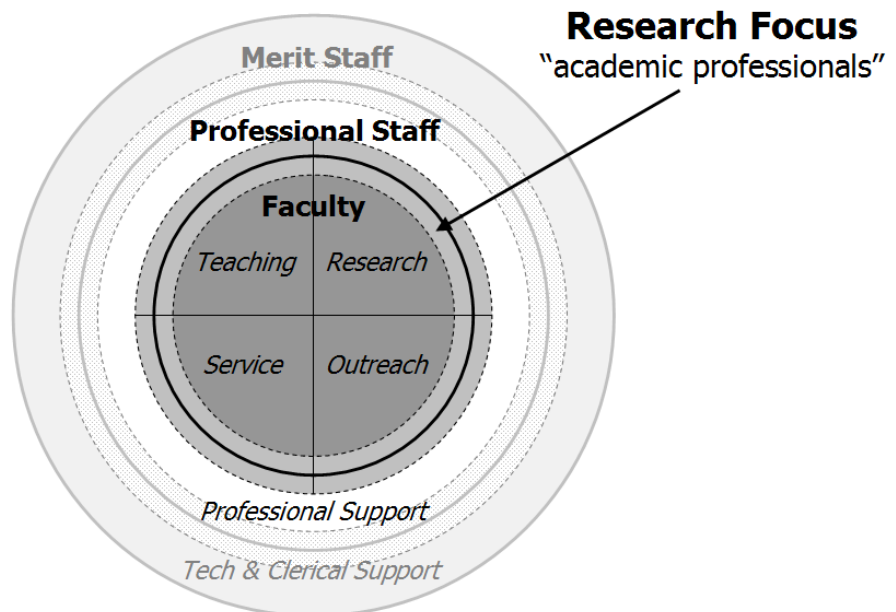


Figure 1.3. Current employee functions and responsibilities model.

one group to another. These transitional boundaries are where interesting human resources issues are arising in higher education. The professional staff and faculty boundary is specifically where this research focuses.

Summary

The research university is:

an institution that preserves and enlarges our base of knowledge, trains our scientists and scholars, educates our professional and managerial workers, creates technological innovations that drive our economy, devises medical advances that enhance our well-being, critiques our social, political, and economic institutions, recaptures our past, enriches our cultural and aesthetic lives, and informs virtually every aspect of our activities in a knowledge-based world. (Tighe, 2003, p. 1)

This description typifies Kerr's idea of the multiversity: an expansive higher education institution designed to meet many needs. From this description one can see how the faculty alone can no longer meet all of the diverse needs and support the infrastructure of the multiversity.

Over time, professional staff have filled many of these new and expanded roles and responsibilities across the research university. Some of these responsibilities have included direct academic responsibilities within the teaching and research areas of the institution. The focus of this study is to identify roles traditionally assigned to faculty that professional staff augment in the teaching and research dimensions of research universities, where in the institution these staff are utilized and the characteristics of the professionals who take on these responsibilities.

This study provides an understanding of the shift in a subset of professional positions participating in teaching and research at the research university, helps university decision makers frame difficult financial, academic, and cultural issues that are a result of the process to assign some traditional faculty roles and responsibilities to academic professionals, and contributes to the body of knowledge in the discipline of higher education.

Determining the underlying structure of professional staff who do academic work at the research university is the first step leading to important findings on the proper balance of human resources for the academic workplace. This balance includes the roles and responsibilities of administrators, faculty, professional staff (including academic professionals), classified staff, and graduate and undergraduate student employees as the multiversity continues to evolve.

The remainder of this report describes the research progressing from this introductory chapter through findings and conclusions. In Chapter Two the purpose and research questions of the study are framed through a literature review. Chapter Three outlines the methodology for conducting the research. Chapter Four describes the data analysis focused on describing academic professional staff through answering the research questions. Finally, Chapter Five summarizes the results of the study, discusses the implications of discovery, and suggests future research based on outcomes.

CHAPTER 2

LITERATURE REVIEW

The main topics researched in this study can be divided into a few key areas, each of which is addressed in a separate section of the literature review. The characteristics of professional staff and roles and responsibilities for academic professionals within the university's academic mission are addressed in several sections as well as the guiding concepts that frame each of them. A section on previous research studies also is presented (Creswell, 2003).

To frame the literature review by the research questions being explored, the subjects of the study are a subgroup of professional staff at public research universities primarily involved in teaching, research, and advising (academic professionals). The variables are those characteristics of the academic professional staff that have allowed them to fill the specific teaching and research niches at the public research university. These include the roles and responsibilities of the academic mission of the university that these professionals have taken on through the expansion of the multiversity, the teaching and research activities that have traditionally been carried out by the faculty, and where in the university this shift has occurred. The concepts that frame and guide this study also are presented in the literature review.

Professional Staff at Public Research Universities

Higher education professional staff have not been in the forefront of educational literature (Rosser, 2000). Liebmann states, "There is, at present, an almost total lack of any overall discussion of staff employees in the literature of higher education, either from the perspective of their formation as a body, or their composition and demographics today"

(1986, p. 2), which continues to be the case currently. This can be viewed negatively, as in there is not much of a history of research and literature to frame a study, or positively, as there is much to be discovered and shared about these staff members. Taking the latter, positive perspective helps to frame the proposed research along with the guiding concepts discussed below.

Definitions of Professional Staff

One of the largest impediments for searching literature on this topic is identifying a unifying definition of this employee group. Scott (1980), Rhoades (1998), Toutkoushian (2000), Gornitzka and Larsen (2004), and Johnsrud (2004) are a few of the researchers who have classified this group somewhat differently; thus, comparison among studies can be difficult.

Scott (1980) describes this group as “collegiate middle managers” or administrators, in order to compare them with faculty and senior administration (many who have faculty appointments). Scott’s reasoning for his classification is to show how mid-level administration has grown dramatically in higher education and the role and status implications contained in that growth for non-faculty employees. Scott uses the analogy of a feudal society where he views collegiate middle-managers (lords, squires, and yeoman) in “a hierarchical ranking of status levels in which there is mobility, but at either end of which is another level of rank – royalty on the one” (faculty and senior administration) “and peasant on the other” (non-exempt or classified staff) (p. 386). Middle-managers “are ‘knowledge professionals’ who do ‘operating work.’ They contribute the essential knowledge without which the key decisions cannot be made... but they are virtually unknown to their faculty, trustees, and general public” (p. 388).

In his research on gender equity in nonfaculty salaries, Toutkoushian (2000) describes five major categories of employees within higher education. These include faculty, administration (senior), professional staff, operating staff, and teaching and research assistants (graduate students).

Gornitzka and Larsen's research on restructuring the university workforce (2004) focuses on "administrative staff." The classification the authors use is a multi-leveled one. The first division is between academic and non-academic staff. Non-academic is then divided into technical/maintenance and administrative (the focus of their study). Administrative staff is then divided into clerical and professional administrative staff/higher administrative staff. Library staff are considered academic staff.

Initially it seems the classification of employee types between these authors is somewhat qualitatively comparable, but it is very difficult quantitatively to find the boundary between the groups and then make predictions or conclusions from any data. However, there is a quantitative classification system that could possibly be used, the classification of the eight groups of higher education employees from the U.S. Department of Education (2006) reported through the Integrated Postsecondary Education Data System (IPEDS).

Johnsrud (2004) uses the IPEDS employee classification system in her study of the demographic and work life issues of "support professionals." This system allows comparison between studies that use this classification; however, a majority of the references cited in this study do not use this classification system, and, more importantly, it does not compare well with the classification determinations needed for this study.

In addition, the College and University Professional Association for Human Resources (CUPA-HR) offer a classification system that is used mainly for salary and

benefits surveys. This classification system contains a fairly comprehensive set of position descriptions (College and University Professional Association for Human Resources, 2007)

As indicated in the definitions section, the standard definition of professional staff for this study comes from the University of Arizona Department of Human Resources (2005) which includes academic professionals, service professionals, and non-tenure-eligible (NTE) faculty (see Appendix B) although NTE who are not also professional staff are not included in this study. As indicated in the discussion of terms section, the University of Arizona classifications system also compares well with Iowa State University classifications.

Quantitative Descriptions of Professional Staff from Previously Collected Data

There are three primary databases that contain data useful to describing the university professional staff for this study – one of which is a national database (IPEDS) and two which are local to Iowa State University (ISU Human Resources database and the ISU Institutional Research database).

The IPEDS database. As pointed out above, the IPEDS database has been the one national data set that has been used most consistently in comparing and contrasting professional staff in the literature. It is, however, very limited for any type of disaggregated classification comparisons. For example, the division between professional staff and classified staff is blurred. A researcher would have to go back to each institution's institutional research office separately to see how it categorized its staff for the purposes of the IPEDS survey (B. Bergman, personal communication, August 26, 2005). In addition, it is impossible to determine who in the database are non-tenure-eligible faculty, let alone if they are considered professional staff or faculty. It is also impossible to differentiate the academic professional (research, teaching, or advising) from other professional staff using the working

definitions for this study. Thus, the IPEDS data can only give us the broadest glimpse of professional staff and are of relatively little use for the specific research questions addressed in this study.

Beyond these limitations, the IPEDS database is still of use to present some basic national statistics for this group of academic professionals. According to Rosser's (2000) analysis of the IPEDS 1995 Fall Staff report, professional staff (called midlevel administrators by Rosser and encompassing 2 of the 8 IPEDS employee classifications, support-service and technical para-professional) represent 28% of full-time staff within postsecondary institutions compared with 31% for faculty and 8% for administrators. Women hold 60% of the professional staff positions and 20% nationally are minorities. The relative percentages of employee groups vary widely, however, even when comparing only research universities (Kane, 2004).

Rosser (2000) postulates that professional staff members at any one institution tend to reflect the local and student communities more closely than faculty or administrators "due to the nature of the midlevel positions themselves as well as the institution's hiring practices" (p. 6-7). These facts are supported by the regional/national scope of faculty and administrator searches compared with professional staff who are more apt to come from qualified candidates within the institution or more locally (Rosser). This assumption would be supported by the responsibility accrual concept guiding this study.

Iowa State University data: Offices of Institutional Research and Human Resources. This study uses Iowa State professional staff as a proxy group for studying professional staff at American public research universities. To make the case for this proxy it is important to compare national data with that of Iowa State University. Data categorized similarly to the

IPEDS national data set were taken from the Iowa State University Fact Book (2006) for evaluation. At Iowa State, professional staff account for 40% of the full-time staff compared with 31% for faculty, 28% for merit employees, 1% for contract employees, and less than 1% for non-faculty administrators. Women hold 51.7% of the professional staff positions at Iowa State, and 9.3% are minorities. As theorized by Rosser (2000), these figures for composition of professional staff more closely correspond to Iowa demographics than national demographics.

The case for Iowa State University as a proxy for this study. Iowa State University is one of approximately 100 public research universities in the U.S. When Iowa State is compared with only public research institutions that are the focus of this study (especially being framed by the multiversity construct), Iowa State compares very closely in percentage of professional staff with 38% nationally compared with 40% at Iowa State (Iowa State University, 2006; Kane, 2002, 2004). Using this figure for comparison, an assumption was made that Iowa State is a reasonable proxy for other national public research universities. As discussed earlier, however, this study should be replicated at other public research universities before findings and conclusions are broadly applied.

Qualitative Descriptions of Professional Staff: Work Life Issues

A large proportion of the articles reviewed for this study involved the work life issues of non-faculty academic professionals. To obtain an accurate portrayal of who professional staff are and how they compare to other employee groups in higher education, several of these work life issues are addressed.

Morale issues. Even with the exciting prospects of new and fulfilling roles for professional staff, there is still a sense of second-class citizenship among many non-faculty

employees. Rhoades states, “The terminology we use of ‘administration’ and ‘support’ suggests employees who are ancillary to the primary professionals and functions of the academy... The terminology also suggests not just a minimal (or subordinate) role, but limited in size” (1998, p. 119). Even the language in the literature shows why morale and self-image are issues surrounding professional staff.

Other studies that focus on professional staff also include mention of morale issues of professional staff. Rosser (2000) cites “midlevel administrators are the unsung professionals of the academy – unsung because their contributions to the academic enterprise are rarely recognized” (p. 5). Gornitzka and Larsen (2004) report, “They see themselves (non-academic administrators) as serving academic staff, and in doing so they perceive themselves as reactive rather than active,” their “role is undervalued in the academic community,” “and they lament the popular academic discourse that belittles their role in ‘keeping the wheels of the university going’” (pp. 464-465).

As discussed above, Scott uses the analogy of a medieval feudal society in his research on collegiate mid-level managers (1980) to show the place of these employees between the royalty (faculty and senior administration) and the peasants (non exempt, classified employees). Scott goes further to cite that “the literature on middle managers, scant as it is, includes many references to the lack of consideration or respect shown them and to the ‘stepsister’ status accorded them by senior administration and faculty” (p. 394).

Limited opportunity for career growth and advancement opportunities, along with lack of recognition, is cited by Johnsrud (2003, 2004) as one of the most important issues for professional staff. It seems that much of the literature on professional staff, whatever its primary focus may be, also addresses issues of morale, including the place of the non-

academic at an academic institution, job satisfaction, compensation, and retention among other issues affecting morale.

Professional development. Johnsrud (2004) found that access to professional development opportunities for professional staff has a major impact on their level of job satisfaction. Johnsrud and Rosser (2000) describe the career path of midlevel administrators to be without direction, with a dearth of training and development opportunities available to prospective, entry level, and mid-stage employees. Indeed, they propose that the professional's career path is more of "luck and propinquity; it is rarely the result of planning" (p.1). As a result the professional employee is limited in his/her career growth and advancement opportunities

To alleviate this lack of professional development opportunity locally, Scott (1980) suggests that midlevel administrators need to be participating in their professional associations for professional growth and development as a support system that they rarely receive on their respective campuses. "For collegiate middle-managers in the U.S., national associations provide peers, recognition, training, direction, guidance, rewards, and information about their jobs and their profession's standing" (p. 390).

The Expanding Role of Professional Staff in Higher Education

The idea that universities are constantly growing and evolving is central to how professional staff have begun to take on a more central role in the university's teaching and research (Liebmann, 1986). The ideas of the multiversity and responsibility accrual are appropriate guiding frameworks for this perspective.

Guiding Concept: Kerr's Multiversity

As discussed in the introduction, the idea of the multiversity was introduced by Clark Kerr in a series of lectures at Harvard in April, 1963. From these lectures came Kerr's *The Uses of the University* (1963) and the idea of the multiversity began to be widely disseminated. The heart of the concept of the multiversity lies in its varied and far-reaching ideals. "Drawing on history, sociology, philosophy, political science, and economics it touches on a myriad of issues related to institutional purpose, faculty, students, teaching, curriculum, governance, and the presidency, among others, and places them in social context" (Birnbaum, 2002, p. 451-452). Kerr situates the idea of the multiversity historically as well as within the context of contemporary types of higher educational institutions. He states:

The "Idea of a University" was a village with its priests. The "Idea of a Modern University" was a town—a one-industry town—with its intellectual oligarchy. "The Idea of a Multiversity" is a city of infinite variety. Some get lost in the city; some rise to the top within it; most fashion their lives within one of its many subcultures. (1963, p. 31)

The refocusing of efforts at the university and its evolution had both positive and negative effects. While Kerr's prediction of a knowledge-based "City of Intellect" has certainly come to pass with the increased economic importance of the university, increased federal funding, and greater involvement of the university in society (Birnbaum, 2002), the university itself has changed a great deal. These changes include faculty who are more immersed in the collegiality of their discipline and less in their institutions (Birnbaum, 1988), disparities between the haves in the sciences and professions and the have nots in the arts and

humanities, and competition within the university over issues of resources including research versus teaching, graduate education versus undergraduate education, and market forces over institutional policy. As Birnbaum points out:

We are still only beginning to contemplate the potential implications of this new reality's effects on the relationships between individuals, institutions, societies, and nations; and it is by no means clear that its consequences will be benevolent; ever since Eden, knowledge has always come at a price. (p. 454)

The consequences of Kerr's multiversity concept on this study are mainly the human resources that enabled and continue to enable these changes to occur in the university. In order to broaden the mission of the university to become a multiversity, differentiation of the workforce has occurred. The faculty no longer do all of the work of the historical university. Major services including support for students, business processes, facilities, information technology, as well as teaching, research, advising and its support have been incorporated outside the faculty-centric framework of the university.

The concept of the multiversity would suggest that these changes had to occur to keep the institution advancing. To support these different areas of endeavor, employee specializations have evolved to address the plethora of services. Most of these new services are not a direct part of the delivery of the teaching and research products of the university. But because of the tremendous amount of work generated by the multiversity and the limited amount of faculty (and funding to support the faculty), some overlap of faculty and professional roles and responsibilities has occurred. This is where the multiversity concept and this research intersect.

Guiding Concept: Miner and Estler's Responsibility Accrual

To guide the discussion of the evolution of professional staff into positions within the teaching and research realms at the university, one intriguing idea in the literature is responsibility accrual. The concept of responsibility accrual (Miner & Estler, 1985) maintains that jobs (in this specific case, higher education positions) evolve when an “employee accrues responsibility and/or knowledge well beyond normal growth in the job. Essentially a new position is developed, which may then be formally acknowledged by the institution” (Miner & Estler, p. 121). By discussing the job types and credentials for holding these jobs in the higher education market, the authors introduce ways in which individual, organizational, and environmental factors associated with these evolved jobs affect individual responsibility accrual, and identify theoretical implications of this individual / job accrual. The concept of responsibility accrual suggests that unplanned career mobility may arise from both individual abilities and developing organizational issues which evolve into previously nonexistent positions and roles.

While Miner and Estler (1985) propose responsibility accrual at the individual job level, theoretically this concept can be expanded to a group of jobs as well. Organizational issues may require the evolution of an entirely new set of job responsibilities, or situations may require that a new group of employees with a different set of credentials take over traditional roles but in a new, evolved way. Employee group characteristics such as influence over organizational processes, intellectual curiosity, and performance/competence, could lead to classification changes within an organization.

Indeed these changes in group characteristics are at the heart of this thesis; as the research university has grown (into a multiversity) needs have arisen that could not (or would

not) be filled by existing faculty. Thus, a void was created where professional staff slowly provided the needed services for the growing university – their jobs evolved to meet those needs. These changes help explain the growth of the academic professional over time. In like fashion, further growth of the university, with limited resources to wholly fund full-time tenure-track faculty for the research and teaching needs of the university, required more academic professional jobs to evolve to meet these needs as well. These are the professionals who this study focuses upon and it is theorized that their jobs have evolved as a group in a similar responsibility accrual fashion as Miner and Estler (1985) propose for individual job evolution in higher education.

Productivity and Expanding Roles of the Professional in Higher Education

Due to the growing and evolving university infrastructure, several authors tie changes in institutional administrative costs to changes where outputs (education, research, and application of research and teaching) are being produced in the higher education system. This association is a direct reflection of how the professional's role has been changing to become more central to the university. Gornitzka and Larsen (2004) make the case that higher education administration has grown at a high rate in the last decade, but more important is the comparative change of the work being done by professionals and the advanced certification that these new generations of employees bring to the higher education organization — thus the growing “professionalization” of this group of employees. There is more work to be done, more workers to do it, with an increasingly more professional staff. Gornitzka and Larsen observed, “Our data clearly indicate that there has been an increase in the level of formal qualifications that are required to hold a position as university administrator” (p. 463), defined as mid- to upper-level managers by the authors. This

professionalization concept supports the multiversity concept while also tying in the concept of responsibility accrual to higher education and professional employees.

Rhoades (1998) speculates on how this professionalization will affect academic professionals in the future. By focusing past research primarily on the faculty and not studying the non-faculty sector of academic staff closely:

we are blinded to the substantial changes in the higher education work force. That is particularly true in the case of administrators, who get studied far less than faculty. It is time we recognized that non-faculty personnel, particularly in recent years, have become more directly involved in the “production work” of the academy – producing students and research. (p. 116)

Discussing more about the future work experiences in higher education, Rhoades (2001) concluded, “Data from recent studies point to growing numbers of nonfaculty professionals who represent major labor costs and are often involved in producing teaching, research, service, and revenue. Most campus employees (over 70% in the 1990s) are not faculty.... In short, to understand productivity in academic institutions one has to go beyond faculty” (pp. 621-622).

Previous Literature on Academic Professional Staff

As pointed out several times above, there is a dearth of literature on university professional staff. Where such literature exists, it must be examined closely to make sure the author’s definition of “professional staff” is comparable to other studies. Past reviews have resulted in several general areas of scholarship describing professional staff: quantifying administrative costs; productivity, including the expanding role of the academic professional in higher education; and work life issues, including morale, retention, and compensation. In

addition, Liebmann provides a general synopsis of the history of professional staff in an unpublished paper from 1986. Even with these few examples of professional staff in higher education literature, little of this research has focused on professional staff working in teaching, research, or advising – the academic professional.

Focus on the Faculty: A Gap in University Employment Literature

Most of the literature in the area of university employment, especially in teaching and research, equates the “academic workplace” with faculty almost exclusively, and very little has been written that describes professional staff. Faculty have been the *de facto* university employee group for most previous studies. Over time this focus on faculty has resulted in a void in research on other higher education employees that has widened due to the growth of non-faculty employees and their increasing importance within the university (Rhoades, 2001).

Rhoades (1998, p. 114) concluded, there is a:

dichotomy of faculty versus administration. The simple separation is built into our everyday language, our work, our professional affiliations, our conceptualizations, and into our theories about colleges and universities. No doubt, many of us have heard faculty colleagues equate administrators with “bureaucrats,” contrasting them with the professionals (faculty) who do the “real” work of the organization.

Since the faculty generate most of the scholarly university research, this focus upon the faculty as the primary, if not only, employee group (especially focusing on academics) seems natural, if incomplete. “Non-academic staff were generally seen as a residual category, with a defining characteristic of *not* being academics” (Gornitzka & Larsen, 2004, p. 456). Rhoades highlights this dichotomy in the workplace, the cultural split in higher

education personnel of “the faculty and the “t’aint” (it ain’t) faculty” (1998, p. 112). One must wonder if this type of thinking takes a toll on the scholarship of non-faculty employees, especially those involved in academic production.

The relative lack of literature on professional staff has its negative and positive dimensions. There is little doubt this study would be much better grounded in the discipline of higher education if there were more research and subsequent articles devoted to academic professional staff. Looking at the situation in a positive light, however, this also means that there are opportunities for new research in an understudied topic.

Quantifying Teaching, Research, and Administrative Costs

Much of the literature that can be found that includes academic professional staff is written from the perspective of the human resources costs and benefits to the institution. Rhoades (1998), Gumport and Pusser (1995), and Leslie and Rhoades (1995) write about academic professionals in light of quantifying administrative costs for this employee group. Their hypotheses were that if employee classifications were disaggregated into smaller categories, administrative costs could be identified and analyzed more accurately. In addition, and reflecting the discussion above, Rhoades suggests that the university would be served better by analyzing both traditional faculty and administrative positions, with an eye on productivity cost savings that could be borne by non-faculty employees. For example, Rhoades argued, “Indeed, it may be that an institution can contribute more to enhancing students’ overall educational experience, and to improve persistence and graduation rates, not simply by hiring more faculty, but by hiring more non-faculty personnel” (1998, p. 117). He went on to recommend that this issue deserves more empirical research.

Leslie and Rhodes (1995) detailed the tremendous growth in administrative costs and infrastructure over the last four decades and many reasons for the growth. The authors outline how important definitions are to an accurate and detailed accounting of administrative costs (especially people) while explaining the expanding role of the academic professional as a producer in higher education. A much more detailed system of identifying personnel costs (through a detailed classification system) is needed. While they conclude that “nonfaculty personnel also produce higher education outputs and, more important, are superior to faculty at enhancing revenues” (p. 189), they also ask “whether increased administrative costs have contributed to increased administrative services” (p. 190). Only a detailed accounting of costs and services can provide such an answer.

Gumport and Pusser (1995) also studied rising administrative costs and their consequences in higher education. Their research followed a similar dissection of administrative costs as Leslie and Rhoades (1995) but using one institution’s data as an example to inspire other, real-world, case studies of administrative growth. After an intensive search of the data “to consider whether administrative expenditures and positions have grown beyond predictions” (p. 507), the authors echo the sentiment described by Leslie and Rhoades observing, “Categories of resource allocation need to be analyzed for what they may reveal or obscure about the changing nature of organizational practices” (p. 508) and decision-making.

Literature Focused on Academic Professionals

As a subgroup of professional staff, little published literature focuses only on academic professionals – that portion of the professional staff directly involved in teaching

and research. To contribute knowledge to this area of higher education is one of the primary goals of this study.

Academic professionals in the research area. One unpublished study that addresses many of these issues directly is the work of Kane (2005) who examined academic staff carrying out research work at Iowa State University. The hypothesis for this study was that there were differences in academic experience levels, salary expectations, and funding sources between the general population of professional staff and those classifications that make up both upper-level professional staff (senior classifications) and the academic professionals (primarily doing research – not including teaching or advising in this particular study).

Kane's analysis showed that experience levels, highest degree attained, and length of service were statistically significant factors in explaining whether a professional employee would be defined as an academic professional. Funding source (whether funded by state appropriations or grants) was also a statistically significant factor but not as strong. The study failed to show there were any statistically significant salary differences between service (non-academic) and academic classifications.

Kane's study was limited by the subjective nature of assigning professionals to an academic- (teaching or research) or service-oriented position type (a limitation that this current study addresses through survey research). The position types for the study were defined by both the Provost's Office and Vice Provost for Research at Iowa State through individual conversations, with research positions given highest academic priority. Challenges to those assumptions could create much different groupings between academic and service position types than those found in the study.

The “academic professionals” defined in Kane’s study were mostly research professionals. The position types described in the study as “service professionals” fell into two groups. Those whose main work can only be pursued at an institution of higher education were classified as “academic.” All others remained “service professionals.” The question on subjectivity of the classification scheme was not addressed in the study but left for future research.

Inquiry Supported by the Literature Review

The preliminary review of literature clearly shows a lack of academic inquiry into the increasing role of professional staff in the university environment, especially those involved in the academic mission. Given this, literature assessing the role of academic professionals working directly in the teaching and research missions is harder still to find.

Literature relating to the first three research questions of this study, what roles and responsibilities overlap between professional staff and faculty, where in the university this overlap occurs, and what are the characteristics of the professional staff who serve in this overlapping role, are clearly not well represented in the literature. There is a bit more literature linking to the fourth research question of this study: how did professionals secure the positions which augment faculty roles. This is investigated most prominently by Johnsrud and Rosser (2000) who describe the paths of midlevel administrators as being limited in their career growth and advancement saying this path is a matter of “luck and propinquity; it is rarely the result of planning” (p.1).

This lack of focused literature indicates why answering the research questions in this study will help fill a large void in the scholarship of higher education while giving leaders data and tools to better manage the human resources at public research universities.

Summary

A review of the literature pertaining to professional staff at research universities leads to three main areas of inquiry.

First, there is very little research that has been done on professional staff working in the university environment. This is in stark contrast to faculty who have been the focus of many research studies in higher education. As a result, there is a void in the literature of the higher education workforce. Closing the gap will be difficult as professional staff are a complicated group to quantify and describe because of a lack of standardized typology of employment categories across American research universities.

Second, what little research that has been done on professional staff has been focused on quantifying the costs of administration and human resources, work life issues of staff, and professional development. There has been little research published in the area of academic professional employees who work toward the academic mission of the research university.

Third, the literature supports the fact that professional staff are becoming the largest employee group at the research university. The idea that universities have become complex, multidimensional institutions that lead to a complex and multidimensional workforce is central to this study. The concepts of the multiversity and employee responsibility accrual from the literature will be the guiding frameworks for the study.

CHAPTER 3

METHODOLOGY

This chapter provides the framework of methodology and methods for this research beginning with revisiting the research questions that are to be answered by the study. This section is followed by a discussion of the descriptive research methodology and the survey research methods used for the study. Next, the data sources, participants, variables, and data analysis procedures for the survey research are presented. Finally, methodology and design limitations are discussed.

Revisiting the Research Questions and Guiding Concepts

This study addresses the research questions first identified in chapter one and proposed through the description of the need for the study. To build a solid methodological approach and methodology, the research questions were analyzed to see how they can best be answered through the lens of the guiding framework adopted for the study and literature in the field. In particular, the research questions and the methods used for answering them were informed first by understanding that the research university is a growing, evolving institution that requires substantial resources, especially human resources, to develop and change with the institution's mission.

In addition, the development of the methods for answering the research questions were informed by an extension of the concept of responsibility accrual, where a group of employees, through opportunity, job skills, professional development, and organizational and political knowledge, fill niches that develop in the higher education workplace as it evolves.

This study addresses the following research questions:

- 1) What roles and responsibilities in teaching, advising, and research overlap between professional staff and faculty at a research university?
- 2) Where in the university's colleges, departments, and/or administrative units does the overlap of professional staff and faculty responsibilities occur?
- 3) Which classifications of professional staff are most likely to be involved in the overlap of responsibilities with faculty and do these staff exhibit commonalities in demographics, job characteristics, or faculty relationships?
- 4) How did academic professionals secure their positions? Was it a matter of coincidence, a matter of deliberate career planning, or both?

Methodological Approach

To answer these four research questions, a methodological approach that has the best opportunity to draw logical conclusions was required. This study featured a quantitative approach, more specifically, a descriptive quantitative research approach that examines a situation *as it is*. This research methodology is described as “identifying the characteristics of an observed phenomenon or exploring possible correlations among two or more phenomena” (Leedy & Ormrod, 2005, p. 179). It “does not involve changing or modifying the situation under investigation” (p. 179). This type of research is aligned with the more qualitative methodologies of observation and interviewing but using a process that leads to quantifiable data. This description (of professional staff) was conceptualized with an eye toward showing and describing any relationship of elements (professional staff characteristics) that presented themselves during the study.

Descriptive Research

Descriptive research includes many types of research methods and procedures, including observations, surveys, self-reports, and tests. Descriptive research aims to gather data without any manipulation of the research context (Henrichsen, Smith, & Baker, 2005). In most cases it is non-intrusive and deals with naturally occurring phenomena. It focuses on individual subjects and may go into great depth and detail in describing them. Descriptive research allows for the investigation of large groups of subjects. Often these are pre-existing classes of people and there is a tendency to produce results that show common or typical behavior for a group. It is one of the most common survey research methods and is the basis for more advanced analysis techniques (Fink, 2006).

For this study the theoretical framework behind the research methodology suggests there is meaning within higher education professional staff characteristics to be arrived at from collecting, analyzing, and interpreting data using the scientific method of deductive reasoning through descriptive techniques. The descriptive research methodology fit very well with the various needs of this study, specifically in answering the research questions asked about professional staff.

Research Methods

Several research methods were used in this study, the primary two being survey research and secondary data analysis.

Survey Research

The primary research method used in this study was the survey questionnaire including development, testing, data collection, statistical analysis, and interpretation of results to answer the research questions and then proposing new ideas based on the results.

Broadly called survey design by Creswell (2005), survey research, descriptive survey, or normative survey by Leedy and Ormrod (2005), and survey methodology by Groves (2004), descriptive quantitative survey research is a method where the researcher attempts to obtain information and describe trends in a large population of individuals. This is a procedure in “which investigators administer a survey to a sample or to the entire population of people in order to describe the attitudes, opinions, behaviors, or characteristics of the population” (Creswell, 2005, p. 354). “Survey researchers often correlate variables, but their focus is directed more toward learning about a population and less on relating variables or predicting outcomes as is the focus of correlational research” (Creswell, 2005, p. 354).

Survey research can be fairly straightforward in design when compared with other methodologies. “The researcher poses a series of questions to willing participants; summarizes their responses with percentages, frequency counts, or more sophisticated statistical indexes; and then draws inferences about a particular population from the responses of the sample” (Leedy & Ormrod, 2005, p.183). The survey produced the dependent variables of the study and some of the independent variables as well (see Appendix F).

Survey objectives. In this study there were two broad objectives to pursue from the survey questionnaire. The first objective was to describe the current situation of professional staff since there is little information about them as a group in the literature. The second objective was to identify employment patterns of academic professionals that come from the survey data. Can inferences to the population be found? Are there relationships that can be found from the data? The goal was not to begin the study with hypotheses regarding variable relationships in mind, but rather to identify and describe characteristics and relationships and

frame future research through the data analysis. In addition, linking the survey research data with a secondary data set allowed an even more robust analysis of the survey data.

Secondary Data Analysis

Secondary data analysis is accomplished through working with data that already exist among the wealth of data available both in the public and private realm. The challenge with secondary data is to assure that the data appropriately address research questions such that one is not caught in a dilemma of altering guiding theory, objectives, or hypotheses to fit the data. When evaluating secondary data sources for use in a study, appropriateness of the unit of analysis and sampling, the variables and their values, and levels of measurement need to be addressed (University of Wisconsin, 2005). The secondary data for this study meet these criteria well.

The survey for this study was prepared with a sampling frame provided through the Iowa State University Human Resources (ISUHR) database that allowed survey respondent unique identifiers (email addresses) to be coded into the database itself. These unique IDs allowed the linkage between the survey data and the secondary data provided by ISUHR. Most of the independent variables for the study were provided in the ISUHR database. These variables were selected based on the hypothesis that they could have an affect on the dependent variable academic professionals.

The Study Population

The group of primary focus for this research is university professional staff whose work is part of the teaching and research missions of the university (academic professionals). Determining the boundary between academic and non-academic responsibilities is a difficult task (Kane, 2005) as many professional staff are involved in supporting the teaching and

research that occur at a research university in a service role but do not actually produce teaching, research or advising. The group at the center of this study is more active in a direct way – teaching or co-teaching a class, advising students, or involved in an original and creative research endeavor.

It is difficult, if not impossible, to differentiate whether a professional staff member is involved in teaching or research, or to what degree, by classification variables in a human resources database (Kane, 2005). That is why the target population for this study had to be all professional staff at Iowa State University who were then asked for their level of involvement through the survey that allowed determination of involvement on an individual basis.

Sampling Design

After defining the subjects of the study based on the research questions, decisions were made regarding how best to gather the data needed to answer the research questions. As described in the literature review section of this report, a national database (IPEDS) was available but did not contain specific enough information about professional employees and their job responsibilities to address the research questions.

The Iowa State University HR database identified all professional staff and could be used to investigate those staff who are part of the academic mission of the university more closely. Thus, this database identified the entire population, and could be used as the sampling frame for the study.

Sampling Frame

The Iowa State University HR database provided the sampling frame for this survey research; it included all professional staff that were employed at the university on October 1,

2006 (n=2454). The ISUHR database is very extensive and variables that pertained to the research questions were requested (data fields requested, calculated, and kept for study and the definitions used from this database are included in Appendix F).

Surveying using a web-based tool (the survey delivery method chosen for this study) is sometimes criticized because the sample collected could be biased through unequal access to the Internet across the population. This potential sample bias did not cause a significant problem in this study as the entire sample (that was the same as the population) had access to the internet through their employment at Iowa State University. This access did not guarantee equal ease of use, however, and this topic will be addressed in the survey instrument development section of the study.

The Survey

The design of a survey usually has a very predictable sequence, a “lifecycle” (Groves et al., 2004). The first step, establishing the goals and objectives of the survey, was introduced through the research questions of this study. The second step, determining the sample, also was defined (all professional staff in order to identify academic professionals at Iowa State University) and framed (through the ISUHR database). The next step was the survey methodology and creating the questionnaire.

Survey Methodology: Developing the Instrument

The primary data collection instrument for this study was a web-based survey. Web surveys have become a very popular medium to collect survey data (Groves et al., 2004). There are many advantages for using a web survey including quick turnaround, relatively higher response rates, lower cost, and more flexibility. In addition to these advantages,

increased honesty and depth of answering open-ended questions can also be achieved (Dillman, 2000).

Dillman (2000) also identifies several disadvantages to web surveys. For example, respondents can drop out in the middle of a survey more easily than by phone or in person. To avoid these dropouts, care must be taken by giving respondents a clear understanding of general and specific directions, number of questions included, and the time it will take to complete the survey. In this research, specific programming was done with the survey instrument on the web to make sure respondents knew how far along they were in the survey on each page and were made aware of the time commitment in the invitation email.

In addition, respondents to the web survey must have adequate abilities and access to up-to-date equipment, software, and the Internet to successfully complete the web-based survey (Dillman, 2000). A logical assumption was made that most professional staff at Iowa State University (the sample) had access to computers and the Internet and had good computer skills and the described disadvantages were of limited consequence for this study.

Other disadvantages mentioned by researchers were also minimized by the sample of this particular survey. For example, web surveys are easily taken several times by the same respondent or by other users not designed to be part of the survey when access control is not a part of the design (Dillman, 2000). In this study, access was controlled by the web survey interface through email addressing. Since respondents taking the survey were all employees of ISU, each had an assigned email address for their individual use allowing unique access to the survey. This unique access also allowed for respondent tracking and customized delivery of follow-up reminder emails when required.

In all, the web survey was kept as short as possible in accordance with best practices (Dillman, 2000). All questions had a direct relationship to the research questions guiding the study. The goal for the survey was to collect all needed data in as short a time commitment for the respondents as possible. The survey was designed in accordance with Dillman's principles of web-based survey design (2000). A copy of the final survey instrument can be found in Appendix D.

The Survey Tool

The survey instrument was created within an Internet-based surveying system called SurveyMonkey™. Benefits for using this tool for the creation and delivery of the survey included email access control, invitation emails, customized reminder emails, ability to merge data to the ISUHR database, ease of design, use, and delivery, and low cost per survey. This system allowed surveying of only pertinent content information while most demographic information was retrieved in the background from the ISUHR database. The process allowed participants to complete the survey relatively quickly -- an average of less than 5 minutes (respondent start and stop times taking the survey were collected automatically in SurveyMonkey™).

Using the web-based tool was of great benefit due to its simplicity. It allowed development of a very simple and intuitive user interface to the survey, enabling collection of the most reliable and valid data possible. The researcher completed all programming performed within the application. Many comments from respondents were received about how easy the survey was to use as well as questions on how SurveyMonkey™ was implemented in this study and how it could be used in the respondent's projects.

While the simplicity of the questionnaire design could be looked upon as a limitation of robustness, the straightforward design forced the questions to be asked in a way that respondents more easily understood and were not possibly confused by a more complex survey instrument. Part of the simplicity of the survey can also be traced back to a thorough pretesting of the questionnaire design discussed in detail later in the report.

Answering the Research Questions with the Survey

The survey collected data and information, formed from 19 questions, to answer the four research questions proposed by the study. The survey questions included single choice presence/absence categorical (choose the one best response), multiple choice presence/absence categorical (choose all responses that apply), and Likert-scale ordinal responses. The information required to answer each research question and the corresponding survey questions asked of each respondent are discussed below.

Research question 1. What roles and responsibilities in teaching, advising, and research overlap between professional staff and faculty at a research university?

The data to form answers to this research question came from a series of survey questions in the section titled “Nature of Your Work” asking the respondent to summarize given job responsibilities. These questions include direct academic responsibilities including teaching (teaching a credit or R-credit course), research (directly involved in a research project carrying out the actual research), and advising students. This was the primary question that was used to identify the dependent variable “academic professionals” for the study. Summaries of indirect support of teaching, research, advising, outreach, or other administrative duties also were asked. In addition, each of these questions also asked whether these job responsibilities take place as part of the respondent’s actual assigned

responsibilities or in a more “unofficial” manner. These questions are found on the first page of the survey (Appendix D).

Research question 2. Where in the university’s colleges, departments, and/or administrative units does the overlap of professional staff and faculty responsibilities occur?

The data to form answers for this research question came from merging the survey data to the ISUHR database which included information on the employees primary work area and where funding for their position came from within the university. The answer to the research question comes from analysis of the “Nature of Your Work” section of the survey by the work area in the ISUHR database.

Research question 3. Which classifications of professional staff are most likely to be involved in the overlap of responsibilities with faculty and do these staff exhibit commonalities in demographics, job characteristics, or faculty relationships?

The data to form answers for this research question came from both the survey and the ISUHR database. Dependent variable data was obtained from the “Nature of Your Work” section of the survey and compared with the independent variable data on characteristics of employment from the ISUHR database. These characteristics included job title, gender, race, age, pay grade, salary, appointment type, years at ISU, area of employment, funding stream, highest degree earned, and faculty rank.

Comparison data from the survey were collected to be used for additional independent variables including total length of time in higher education, marital status, and dependent children in the section titled “Background Information.” These independent variables were included in the analysis to determine correlations with academic professional

status. A comparison variable, length of time at Iowa State, was gathered from both the survey and ISUHR database for validity comparison purposes.

Another characteristic to be explored from this research question came from a series of survey questions titled “Working with Faculty.” The survey asked employees to identify their working relationships with faculty by how often they work with faculty, rating their working relationships with faculty, whether the respondent had NTE faculty rank, and about their direct supervisor to discover how closely job responsibilities are enmeshed with faculty and administrators.

Research question 4. How did academic professionals secure their positions? Was it a matter of coincidence, a matter of deliberate career planning, or both?

The data to find answers for this research question came from a series of survey questions titled “Your Career” asking respondents to identify perceptions of their own career paths. Survey questions asked included original career plans for coming to ISU, how close professional work came to their college major(s), a measure of how well planned out their career paths have been, whether they have ever been classified as a merit staff member or faculty, their job satisfaction at ISU, and a question asking staff to identify characteristics of their “ideal job” to gauge latent employment desires of professional staff in academic areas.

Survey Quality: Reliability and Validity

Two of the most common questions in survey research include whether answers to survey questions will be both reliable and valid. These two terms can have different meanings to different audiences. In this study, reliability “is a measurement of variability of answers over repeated conceptual trials. Reliability addresses the question of whether respondents are consistent or stable in their answers” (Groves et al., 2004, p. 261). Validity,

as used in this research, “is the extent to which the survey measure accurately reflects the intended construct” (Groves, p.254).

Many factors contribute to the reliability and validity of survey research and the quality of the information derived from the answers to the survey questions. As Groves states many times throughout his book, controlling error is the key to the quality of survey research including both reliability and validity. Specifically, reliability and validity for this research study were evaluated during the pre-test phase of the study and again in comparing similar data between the ISUHR database and the survey. More detail is included in the pre-test discussion as well as in the Data Analysis and Results chapter.

Survey Quality: Controlling Error

The assessment of a good survey is how well the data delivered for analysis meet the needs outlined in the survey objectives and research questions. The gap between these two points can be described by the errors introduced throughout the survey lifecycle (Groves et al., 2004). This section describes the possibility for error in each step of the process and procedures taken to eliminate these errors as best as possible in this study.

Coverage error. Coverage error is the error between the target population and sampling frame (Groves et al., 2004). The target population in this study is all professional staff. There is little if any coverage error in this study since the sampling frame was taken directly from the ISUHR database. Any concern regarding this error could possibly come from new hires or employees leaving university employment between the time the sample was produced (October 1, 2006) and the data collection ended (November 22, 2006).

Sample error. Since everyone in the target population was in the sampling frame and everyone in the sampling frame was given the opportunity and access (through the web) to

participate, the opportunity for sampling error was small. Of the 2,454 possible professional employees, 2,534 had unique email addresses from the ISUHR database that could be used for the sample. Of the remaining 20 employees whose email address was not provided (blank field in the database), 15 were added to the sample by taking the time to find an official email address that was somehow not listed in the database or finding an alternative email address that could be used. That left only 5 members of the population that were not part of the sample, or a total of 2,449 members of the sample.

Nonresponse error. Nonresponse error is the error of analysis generated from the responders' statistical values being significantly different than the entire sample (Groves et al., 2004). This error is controlled by getting as many sampling units to respond to the survey as possible. In the Notification and Distribution section below, the strategy for invitation and follow-up to reduce the error in this study is presented. An analysis of differences between responders and nonresponders was created for the study to evaluate this error and its statistical significance. This analysis is summarized later in this chapter..

Adjustment error. Adjustment error includes postsurvey adjustments for coverage, sampling and nonresponse errors (Groves et al., 2004). A large nonresponse error could have forced postsurvey adjustments for this study, but 71% of the sample responded to the email invitation. Of that rate, approximately 9% actively declined to take the survey leaving 62% who actually took the survey. While there were no other plans for any postsurvey adjustments, a pattern of responses showed that the "Nature of Your Work" section of the survey which addressed unofficial duties was misinterpreted by many respondents. The postsurvey adjustments are discussed in Appendix A.

Instrument validation. The survey was validated through several pretests of a subgroup of professional staff (both academic and non-academic) as well as advisors in the field of survey research. This procedure gathered relevant input for both content and question complexity, and reliability and validity as discussed in a previous section. The pilot study participants were asked to provide feedback for each of the questions in written form. The researcher also met individually with some of the pilot study participants for one-on-one feedback.

The robust nature of pilot study input (4 separate pretests) resulted in nine versions of the survey, the ninth being the delivered survey to the sample through SurveyMonkey™ and found in Appendix D. The survey invitation was also pretested several times. A version history of the survey and invitation based on pretests, expert review, and formal dissertation proposal can be found in Appendix E.

Measurement error. Measurement error is comprised of several factors including response bias and response reliability. Measurement error is the difference between what is being asked and the reliability or truthfulness of the answers (Groves et al., 2004). Measurement error is highest in questions where the respondent feels some sort of internal or external pressure to not answer in a reliable manner. The survey questions for this study were created to be non-threatening and posed no moral or ethical problems in being answered by the respondents as the survey was tested and assessed from feedback. Based on this assumption, which was tested through instrument validation, there was little significant measurement error in this study.

Processing error. Errors related to processing of the data after it was collected were predicted to not exist. The process for obtaining the survey data from the commercial survey

provider was tested for ease, reliability, and validity through the survey validation procedure. However, upon downloading data from SurveyMonkey™, 5 respondent records where status was coded as “Declined” were found to actually have data. It is hypothesized that these respondents originally declined and then went back to change their survey but the "Declined" tag in the SurveyMonkey™ database did not change. A manual correction of the status for these respondents was made in the SPSS database to bring the total number of respondents to 1,518 or 62% of the sample. Data from the ISUHR database were also validated before the data merger between the survey data and the ISUHR database occurred.

Notification and Distribution of the Survey

The participants of the survey were invited by email to be part of the survey. An introductory section of the email explaining the project and the importance of collecting data on the population was included. In addition, instructions about how to access the web survey and a time frame for completion of the survey also were included. A copy of the invitation letter by email (adapted from Dillman, 2000) and the three follow-up emails can be found in Appendix C.

The availability of a list of nonresponders for this specific study population was a great benefit of using the online survey system. From the sample frame, non-responders were sent a follow-up email 3 days after the initial invitation email as a reminder of the importance of the survey and the timeline. The instructions were again part of the email. This procedure was followed 2 more times for follow-up, on days 7 and 10. The schedule and responses for emails is summarized in Table 3.1. In all, 1,518 respondents (62.0%) of the 2,449 invited finished a survey. In addition, 226 (9.2%) of those emailed invitations

officially declined to take the survey through a link provided in the email, leaving 705 (28.8%) who did not reply.

Table 3.1
Email Notification Schedule and Responses

Date	Business Day	Email	# of emails sent	Responses
7-Nov	1	Invitation	2449	728
10-Nov	4	Follow-up 1	1721	543
15-Nov	7	Follow-up 2	1178	311
20-Nov	10	Follow-up 3	867	162
22-Nov	12	Survey closed	705 non-responses	

Data Collection

Data from the survey were automatically entered into the survey database as each respondent finished the survey. The data periodically were checked to make sure that the collection was progressing as expected. No problems were discovered. Several test runs of the statistical procedures during this time with the “draft” database were conducted to check the procedures and database for reliability and validity.

Overall response. Of the 2,449 professional staff that were sent invitations to participate in the survey, 1,518 completed the survey, a response rate of 62.0 percent. In addition, 226 invitees formally declined to take the survey through the survey response process, accounting for an additional 9.2 percent. Thus, a total of 71.2 percent of the professional staff responded either positively by taking the survey or by formally declining to take the survey. This left 28.8 percent of professional staff where no response was received (see Table 3.2).

Response / nonresponse bias. Statistical testing was done to determine if significant patterns of unit nonresponse could be detected from the population to respondents

Table 3.2
Survey Response

	<i>N</i>	%
Responded	1518	62.0
Declined	226	9.2
No Response	705	28.8
Total	2449	100.0

(Groves et al., 2004). An analysis using the chi-square test of independence was completed for the ISUHR independent variables and the survey response variable (whether each professional staff member had completed a survey). The chi-square test was used based on the categorical nature of both variable types. The analysis, reported in Table 3.3, found little significant difference between the population of professional staff and the survey respondents although several variables tested significantly ($p < 0.05$) including gender, race, job title, pay grade, salary, years at ISU, employment unit, salary fund, and highest degree.

A further statistical test for strength of association, Cramér's V (V) nominal symmetric measure, used on the statistically significant variables showed all of these associations to be relatively weak ($V < 0.200$). The Cramér's V statistic and its use in this study as a refinement for strength of association are explained in more detail in the next section describing data analysis and statistical procedures.

Data Analysis

Testing of the data analysis phase began with the survey validation process. Preliminary data analysis began as soon as the survey was officially opened and data were entered into the database. The data from the survey were transferred to the SPSS statistical

Table 3.3
Chi-Square Analysis of the Population and Survey Respondents

Independent Variables ISUHR (n=2449)	Dependent variable, Response (y/n)			
	χ^2	df	p	V*
Gender	27.245	1	0.000	0.105
Race	19.465	4	0.002	0.089
Age	4.227	4	0.376	
Job Title	90.315	21	0.000	0.192
Pay Grade	19.513	10	0.034	0.089
Salary	16.001	4	0.003	0.081
Grade Depth	11.043	6	0.087	
Term Appointment	1.365	1	0.243	
Years at ISU	12.761	5	0.026	0.072
Area Name	84.357	19	0.000	0.186
Salary Fund	52.815	5	0.000	0.147
Highest Degree	20.204	7	0.005	0.091
Faculty Rank	8.076	6	0.326	
Faculty Appointment	1.747	1	0.186	

* Cramér's V nominal symmetric measure

package for processing. A complete list of variables from both databases can be found in Appendix F.

Statistical Procedures

After importing the survey data to SPSS, the data were joined with the existing ISUHR database by a unique identifier (email address). As outlined in the ISU Human Subjects application, Appendix G, all individual identification was stripped from the database after the merger of the data but before the analysis began. Initially, several standard descriptive statistical procedures were completed including simple frequency counts on the categorical variables. Cross tabulations and chi-square tests of independence were constructed to 1) check for differences in ISUHR demographic characteristics for survey responders and nonresponders and 2) to look for relationships between categorical

independent variables including both survey responses and ISUHR database variables with the dependent variable academic professionals. In this study, statistically significant is defined as $p < 0.05$.

While many of the chi-square tests of the variables in the study showed a statistical significance, an additional statistical test, Cramér's V (V) nominal symmetric measure, was used to measure strength of relationship between the independent and dependent variables of the crosstabulations in the study. The value of Cramér's V ranges from 0 to 1 and indicates the proportional reduction in error in predicting the value of one variable based on the value of the other variable. Low values for the test statistic indicate that the relationship between the two variables is fairly weak. Cramér's V corrects for table size and is appropriate for tables that are larger than 2 x 2 and when both variables are nominal, categorical variables (SPSS, 2003). The statistic can be difficult to interpret and is relative to similar variables and table size (Norusis, 1999), however, some researchers have standardized the value of V (Smith, 2007). The threshold for a weak association in this study was $V < 0.200$ as adapted from the sources referenced above.

Limitations

The survey research method used in this study had several limitations that were managed accordingly and placed into the perspective of the literature of the university academic professional at large.

Definitions and Typology

As discussed earlier, the defining and categorizing of professional staff into group types (academic and non-academic for this research) have been particularly vexing in the literature as well as in past studies (Kane, 2005). The subjectivity that has been used to

divide staff into these groups can be seen at two levels: within the university and comparing one university to another. Although there is an IPEDS classification scheme for university employees, it is at once restrictive, subjective (Bergman, personal communication, 2005), and very different than the taxonomy used for this study. Until a common typology for university staff is adopted, this problem will continue when studying this diverse group of employees.

This classification problem was solved for this study by surveying professional staff and asking about the nature of their work. This process determined whether their jobs could be considered academic or non-academic in nature. This solution does not solve the problem of inter-collegiate comparisons, however, until a similar set of questions is asked of professional staff at other universities.

Location

The survey research used in this study is limited in its conclusions by the sample selected, that of only professional staff from Iowa State University. The use of only one university may put this research into the category of a “case study” of professional staff and academic professionals. This is especially true because two major variables found to have an affect on characteristics and numbers of professional staff at research universities are whether the university is public or private and whether the university has a hospital or not (Kane, 2005). Further research that validates these two variables for significance will be very important.

However, as stated earlier, the case can be made for Iowa State to be considered a typical public research university without a hospital where these results may be transferable to similar institutions.

Time

The survey research conducted for this study was limited to one time period. This study reports on professional staff at the time when the survey was completed in the Fall of 2006. However, this limited time frame does not mean that one could not take the conclusions of the study and extrapolate them over time. Given that very little literature specific to professional staff and academic professionals currently exists, even a study limited to one time period potentially contributes to the discipline of higher education and its literature.

Self-reporting

Because of the nature of this type of survey research, those who were the focus of the study were asked to answer questions about themselves. Issues such as responding to what they perceived the researcher wanted to hear, attempting to make themselves look better, expressing answers without devoting much thought to the questions, intentionally misrepresenting facts, along with others (Leedy & Ormrod, 2005) must be considered in any results where self-reporting is part of the survey technique. Some of this reliability was checked by the ability to compare self-reported results with data from the ISUHR database.

Institutional Research Board

This study has been fully evaluated by the Iowa State University Institutional Research Board and permission to proceed with the research was granted. A copy of the initial evaluation, as well as a modification requested after survey pretests were complete, is included as Appendix G. In correspondence to participants, a web link to the Iowa State University Human Subjects and Informed Consent approval for the project was given. In this way, potential respondents had an opportunity to view the forms before agreeing (by

consenting through the survey itself in accordance with Human Subjects criteria) to being part of the survey. These forms were also available for viewing from a web link in the introduction page of the survey.

Summary

The research questions proposed in this study required sound conceptual and methodological frameworks to be successfully studied and answered. This study was guided by two broad concepts, the complexity of the multiversity and the responsibility accrual of the employees that carry out the mission of the multiversity.

Within this conceptual framework, a descriptive quantitative survey research methodology was chosen to answer the research questions. Here the researcher attempted to obtain information and describe trends in a large population of individuals, in this case the professional staff members who are the subject of this study. By surveying this group it was possible to describe their attitudes, opinions, behaviors, and characteristics and to find patterns and trends within the group. By carefully considering the benefits and drawbacks of this technique including the survey objectives, study population, sampling design frame and bias, and survey design and process to be as free of error as possible, the survey was constructed to successfully address the research questions.

With the conceptual and methodological framework in place, the survey research honed to be as error-free as possible, and the data collecting and analysis processes established, the research questions were successfully addressed, analyzed, and summarized in order for conclusions to be drawn and future research discussed.

CHAPTER 4

DATA ANALYSIS AND RESULTS

Introduction

This chapter provides the results of the data analysis used to answer the research questions of the study as framed in the Methodology chapter. The purposes of this study are to develop an understanding of the roles and responsibilities of professional staff involved in the academic and research missions at American research universities and to understand the degree to which these roles augment faculty roles and responsibilities.

To address these purposes, four primary research questions were investigated using a descriptive quantitative research methodology employing both survey research and secondary data analysis as methods. The four research questions were:

- 1) What roles and responsibilities in teaching, advising, and research overlap between professional staff and faculty at a research university?
- 2) Where in the university's colleges, departments, and/or administrative units does the overlap of professional staff and faculty responsibilities occur?
- 3) Which classifications of professional staff are most likely to be involved in the overlap of responsibilities with faculty and do these staff exhibit commonalities in demographics, job characteristics, or faculty relationships?
- 4) How did academic professionals secure their positions? Was it a matter of coincidence, a matter of deliberate career planning, or both?

Independent variables for the research were collected from an existing database provided by the Iowa State University office of Human Resources (referred to as the ISUHR database). Additional independent variables were collected from a web-based survey to

retrieve relevant information from the population of professional staff (referred to as the Professional Staff Survey or PS Survey) at Iowa State University to answer the four research questions. This data included additional independent variables to supplement the ISUHR database as well as the variables needed to define the dependent variable academic professional for the study.

The data analysis for this study was performed in two main parts. The first major phase was an analysis of the characteristics of the professional staff at Iowa State University using both the ISUHR data and the PS Survey data. The results, “General Descriptive Characteristics of Iowa State University Professional Staff and Professional Staff Survey Respondents,” can be found in Appendix A. This description of the population of professional staff at Iowa State was preliminary to answering the specific research questions. Reporting the knowledge gained of these population characteristics was important to this study for two main reasons.

The first reason, identified in the Chapter One, is that university professional staff in the aggregate have not been studied in any kind of detail. Reporting the population characteristics of professional staff at Iowa State begins to fill that gap in the literature. The second important reason to report population characteristics is to identify differences between the population, the respondents of the survey, and the subset of academic professionals studied through the survey. The independent and dependent variables of the research are detailed along with a descriptive analysis of each. An analysis of the differences in population and respondents characteristics is also presented. In addition, a discussion of post-processing techniques used on the survey data are described to show how the data were

prepared for further analysis. Again, this first major part of the analysis is reported in detail in Appendix A.

The second major phase of the analysis, “Analysis of the Research Questions,” reported in this chapter, is concerned with answering the specific research questions of the study and focuses on professional staff who were identified in the PS Survey as having a primary job responsibility in the teaching, advising, and/or research missions of the university – the academic professionals.

Analysis of the Research Questions

The Professional Staff Survey was used to collect data and information, formed from 19 questions, to answer the four research questions proposed by the study. The survey included single choice presence/absence categorical questions (choose the one best response), multiple choice presence/absence categorical questions (choose all responses that apply), and Likert-scale ordinal response questions. The survey data was merged with the ISUHR database to provide the full set of independent and dependent variables. The analyses used to answer each research question are discussed below. In each analysis, statistically significant is defined as $p < 0.05$.

Analysis of Research Question 1

Research question 1 asks, “What roles and responsibilities in teaching, advising, and research overlap between professional staff and faculty at a research university?”

The data used to answer this research question came from the Professional Staff Survey in the section titled “Nature of Your Work.” Here, respondents were asked a series of questions about their job responsibilities. These questions included three responsibilities used to define an “academic professional.” These responsibilities focused on direct academic

responsibilities including teaching (teaching a credit or R-credit course), research (directly involved in a research project carrying out the actual research), and formal academic advising of students in addition to outreach and professional responsibilities. A total of 17 responsibilities were queried for work performed both as part of an employee's official job responsibilities as well as work performed outside of official job responsibilities, for a total of 34. However, only those job responsibilities that respondents identified as officially part of their duties were used to answer this research question in order to identify the augmentation of faculty responsibilities that supervisors and administrators actually controlled.

While all 17 individual response categories related to the work of professionals as part of their official job duties, only three individual responses were defined for the study as official job responsibilities professionals share with tenure/tenure track faculty that contribute to academic productivity. These three responses, "I teach for-credit or R-credit ISU courses," "I formally advise ISU students academically (as an academic advisor or faculty committee member)," and "I perform sponsored research (through the Office of Sponsored Programs Administration, OSPA)", were considered the responsibilities which augmented traditional faculty responsibilities and defined the academic professional for the study.

The respondents who selected at least one of these responsibilities within their official job responsibilities were placed into the academic professional classification of the professional staff, the dependent variable for the study. A descriptive analysis of this group shows that a total of 360 of the 1,518 respondents fit this classification, or 23.7%. Table 4.1 provides a summary of the groupings of academic professionals and the categories they responded to. The majority (56.1%) of the academic professionals are doing research only.

Those whose work includes only one of the three possible responsibilities include 75.5%, two of the three include 21.3%, and all three 3.1% of all academic professionals.

Table 4.1
Academic Professional (AP, n=360) Responsibilities Responses

Responsibility	Response N	Response %	AP %
None	1158	76.3	0.0
Teaching (Credit)	52	3.4	14.4
Advising (Formal)	18	1.2	5.0
Teaching (Credit) & Advising (Formal)	60	4.0	16.7
Research (OSPA)	202	13.3	56.1
Teaching (Credit) & Research (OSPA)	9	0.6	2.5
Advising (Formal) & Research (OSPA)	8	0.5	2.2
Teaching (Credit), Advising (Formal), & Research (OSPA)	11	0.7	3.1
Total	1518	100.0	100.0

Chi-square Analysis of the Independent Variables with the Dependent Variable Academic Professional

With the dependent variable academic professional defined for the study in research question 1, a chi-square test of independence was performed to discern which of the independent variables had a statistically significant association with the dependent variable academic professional. In addition, for those variables showing statistical significance Cramér's V (V) nominal symmetric measure was used to measure the strength of the association between the independent and dependent variables of the crosstabulation (see discussion of the Cramér's V statistical test and its use in this study in the Methodology Chapter). Weak associations based on the value of Cramér's V are defined as $V < 0.200$ for this study.

The independent variables in Table 4.2 are divided into four groups: demographic, job characteristic, faculty relationship, and career characteristic variables.

Chi-square analysis of the demographic independent variables. Table 4.2 shows that of the 5 independent variables tested, four (gender, age, marital status, and dependent children) showed no statistical significance with the dependent variable, academic professional.

One other independent variable (race) showed statistical significance with the dependent variable academic professional according to the chi-square test but a weak association according to the Cramér's V (V) nominal symmetric measure which was computed as part of the chi-square analysis.

Chi-square analysis of the job characteristics independent variables. Table 4.2 shows that of the 10 job characteristic independent variables tested, three (salary, years at ISU, and years in higher education) showed no statistical significance with the dependent variable, academic professional.

Two other independent variables (pay grade and grade depth) showed statistical significance according to the chi-square test but a weak association with the dependent variable academic professional according to the Cramér's V (V) nominal symmetric measure which was computed as part of the chi-square analysis.

A total of five independent variables (job title, term appointment, unit name, salary fund, and highest degree) showed statistical significance and a relatively stronger association with the dependent variable academic professional according to the Cramér's V (V) nominal symmetric measure.

Chi-square analysis of the faculty relationships independent variables. Table 4.2 shows that of the four faculty relationship independent variables tested, one (working relationship with faculty) showed statistical significance according to the chi-square test but a

weak association with the dependent variable academic professional according to the Cramér's V (V) nominal symmetric measure which was computed as part of the chi-square analysis.

A total of three independent variables (faculty appointment, frequency of faculty interaction, and supervisor type) showed statistical significance and a relatively stronger association with the dependent variable academic professional according to the Cramér's V (V) nominal symmetric measure.

Chi-square analysis of the career characteristics independent variables. Table 4.2 shows that of the 12 career characteristic independent variables tested, five (career relationship to college major, career progression, past position type, ideal job: outreach, and ideal job: administration) showed statistical significance according to the chi-square test but a weak association with the dependent variable academic professional according to the Cramér's V (V) nominal symmetric measure which was computed as part of the chi-square analysis.

A total of seven independent variables (original career intent: teaching, original career intent: advising, original career intent: research, original career intent: not AP, ideal job: teaching, ideal job: advising, and ideal job: research) showed statistical significance and a relatively stronger association with the dependent variable academic professional according to the Cramér's V (V) nominal symmetric measure.

Analysis of Research Question 2

Research question 2 asks, "Where in the university's colleges, departments, and/or administrative units does the overlap of professional staff and faculty responsibilities occur?"

Table 4.2
Chi-square Analysis of Study Independent Variables and Dependent Variable Academic Professional

Independent Variables (n=1518)	Academic Professional			
	χ^2	df	p	V*
<i>Demographics</i>				
Gender (h)	1.225	1	0.268	0.117
Race (h)	20.837	4	0.000	
Age (h)	6.500	4	0.165	
Marital Status (p)	1.934	3	0.586	
Dependent Children (p)	9.961	8	0.268	
<i>Job Characteristics</i>				
Job Title (h)	303.807	21	0.000	0.447
Pay Grade (h)	32.568	10	0.000	0.146
Salary (h)	8.174	4	0.085	
Grade Depth (h)	24.273	6	0.000	0.126
Term Appointment (h)	81.058	1	0.000	0.231
Years at ISU (h)	4.864	5	0.433	
Years in Higher Education (p)	7.444	5	0.190	
Unit Name (h)	186.323	19	0.000	0.350
Salary Fund (h)	90.637	5	0.000	0.244
Highest Degree (p)	144.121	5	0.000	0.312
<i>Faculty Relationships</i>				
Faculty Appointment (h)	110.742	1	0.000	0.270
Frequency of Faculty Interaction (p)	73.914	4	0.000	0.223
Working Relationship with Faculty (p)	15.878	4	0.003	0.106
Supervisor Type (p)	122.628	3	0.000	0.284
<i>Career Characteristics</i>				
Original career intent: Teaching (p)	72.160	1	0.000	0.218
Original career intent: Advising (p)	136.486	1	0.000	0.300
Original career intent: Research (p)	220.228	1	0.000	0.381
Original career intent: Not AP (p)	321.953	1	0.000	0.461
Career relationship to college major (p)	21.369	3	0.000	0.120
Career progression (p)	16.431	3	0.001	0.106
Past position type (p)	10.557	3	0.014	0.083
Ideal job: Teaching (p)	89.851	1	0.000	0.243
Ideal job: Advising (p)	65.848	1	0.000	0.208
Ideal job: Research (p)	170.942	1	0.000	0.336
Ideal job: Outreach (p)	10.435	1	0.001	0.083
Ideal job: Administration (p)	49.672	1	0.000	0.181

* Cramér's V nominal symmetric measure

(h) variable from the ISUHR database

(p) variable from the PS survey

The data used to find answers to this research question came from merging the PS Survey data to the ISUHR database which included information on each employee's primary work unit. The ISUHR database contained information on the employment unit for each professional staff member. The directory variable contained the code for each department of employment. The first two digits of this code represented an aggregate of those departments into major units. The variable was recoded to include only the first two digits resulting in the variable for the employment unit. The resulting units were then assigned their aggregate unit name and recoded into the independent variable for the unit name.

As shown in Table 4.3, 360 of the 1,518 respondents were classified as academic professionals, or 23.7% of respondents. The table also breaks down the percentage of academic professionals by work unit name. The vice president for research unit has the largest percentage of academic professionals at 47.7% of the respondents. Each of the academic colleges also have a greater percentage of academic professionals than the university average of 23.7% ranging from 33.3% to 41.6% of respondents. At 33.3%, Ames Lab/IPRT also exceeds the university average. The chi-square test of independence for the independent variable unit name and the dependent variable academic professional showed a significant statistical relationship and a relatively good association ($V = 0.350$) as shown in Table 4.2.

Analysis of Research Question 3

Research question 3 asks, "Which classifications of professional staff are most likely to be involved in the overlap of responsibilities with faculty and do these staff exhibit commonalities in demographics, job characteristics, or faculty relationships?"

Table 4.3
Frequency and Percent of Academic Professionals by Unit Name

Response	Response <i>N</i>	AP <i>N</i>	AP %
VP Research	111	53	47.7
College of Human Sciences	77	32	41.6
College of Liberal Arts & Science	77	32	41.6
College of Agriculture	183	72	39.3
College of Engineering	63	22	34.9
College of Vet Medicine	62	21	33.9
Ames Lab/IPRT	63	21	33.3
College of Business	21	7	33.3
College of Design	18	6	33.3
Center for Industrial Research and Service	17	3	17.6
Ag Experiment Station	47	8	17.0
Plant Sciences Institute	6	1	16.7
VP Student Affairs	134	21	15.7
Coop Extension Service	223	34	15.2
President's Office	65	8	12.3
Provost's Office	39	3	7.7
VP Business & Finance	126	9	7.1
Information Technology Services	115	6	5.2
Facilities Planning & Management	52	1	1.9
Library	19	0	0.0
Total	1518	360	23.7

Research question 3: Demographic independent variables. The data to form answers for this portion of the research question came from both the ISUHR database and the PS survey. Dependent variable data for academic professionals was obtained from the “Nature of Your Work” section of the survey and compared with the independent variable data on demographic characteristics. These characteristics included gender, race, age, marital status and dependent children.

Gender. The variable gender was analyzed directly from the ISUHR database. The chi-square test of independence for the independent variable gender and the dependent

variable academic professional showed no statistically significant relationship (Table 4.2). Males were slightly above the average of 23.7% and females were slightly below the average as shown in Table 4.4.

Race. The variable race was analyzed directly from the ISUHR database. The chi-square test of independence for the independent variable race and the dependent variable academic professional showed a statistically significant relationship, but one that was relatively weak according to Cramér's V measure (Table 4.2). The percentages of academic professionals by race categories are shown in Table 4.4. All minority categories are above the average of 23.7% while the white, non-Hispanic category was below the average but only by a small margin.

Age. The variable birth year from the ISUHR database was first recoded into age and then into five age groupings with approximately equal frequencies for analysis. The chi-square test of independence for the independent variable age group and the dependent variable academic professional showed no statistically significant relationship (Table 4.2). The percentages of academic professionals by age group are shown in Table 4.4 with ages 34-41 and 42-48 above the average and all others below, but again, by only a small margin.

Marital status. Two additional independent variables, marital status and dependent children, were asked in the PS survey to address whether these external factors might have an influence on the type of work professional staff are involved in. These questions were replicated exactly from the National Study of Postsecondary Faculty (NSOPF) (U.S. Department of Education, 2004) to supply a standard approach to asking and the question and reporting the results.

The chi-square test of independence for the independent variable marital status and the dependent variable academic professional yielded no statistically significant relationship (Table 4.2). The percentage of academic professionals by marital status categories is shown in Table 4.4.

Dependent children. The chi-square test of independence for the independent variable dependent children and the dependent variables academic professional did not result in a statistically significant relationship (Table 4.2). The percentage of academic professionals by dependent categories is shown in Table 4.4.

Research question 3: Job characteristic independent variables. The data to form answers for this portion of the research question also came from both the ISUHR database and the PS survey. Dependent variable data for academic professionals was obtained from the “Nature of Your Work” section of the survey and compared with the independent variable data on job characteristics. The job characteristics group for research question 3 included job title, pay grade, salary, grade depth, term appointment, years at ISU, years in higher education, salary fund, and highest degree earned.

Job title. The first part of research question three asks specifically about the job classification (title) of professional staff. The variable job title family was recoded by the researcher to reflect aggregated categories of the original ISUHR database variable job title.

Table 4.2 shows that this independent variable had the highest strength of relationship values (Pearson chi-square (χ^2) and Cramér's V (V)) of all the ISUHR independent variables with the dependent variable academic professional. As shown in Table 4.5, by comparing percent of academic professionals by job title with the respondent average of 23.7%, a pattern is discernable. The advisor and scientist title show the highest percentage of

Table 4.4
Frequency and Percent of Academic Professionals by Demographic Independent Variables

	Response N	AP N	AP %
Gender			
Female	848	192	22.6
Male	670	168	25.1
Total	1518	360	23.7
Race			
African-American and Black, not of Hispanic Origin	27	11	40.7
American Indian or Alaskan Native	4	3	75.0
Asian or Pacific Islander	59	24	40.7
Latino or Hispanic	26	7	26.9
White, not of Hispanic Origin	1402	315	22.5
Total	1518	360	23.7
Age Group			
22-33	274	60	21.9
34-41	276	74	26.8
42-48	316	85	26.9
49-54	324	76	23.5
55-75	328	65	19.8
Total	1518	360	23.7
Marital Status			
Single and never married	163	32	19.6
Married	1158	282	24.4
Living with partner or significant other	35	9	25.7
Separated, divorced, or widowed	115	29	25.2
Total	1471	352	23.9
Dependent Children			
0	645	136	21.1
1	280	78	27.9
2	372	102	27.4
3	101	22	21.8
4 or more	36	9	25.0
Total	1434	347	24.2

academic professionals at 77.8% and 64.2% respectively. The titles of coordinator, program coordinator, health specialist, and research associate, are also well above the 23.7% respondent average.

Table 4.5
Frequency and Percent of Academic Professionals by Job Title

	Response N	AP N	AP %
Advisor	54	42	77.8
Scientist	120	77	64.2
Coordinator	21	13	61.9
Research Associate	63	28	44.4
Health Specialist	16	6	37.5
Program Coordinator	198	52	26.3
Director	76	15	19.7
Health Professional	11	2	18.2
Program Asst	98	17	17.3
Manager	139	23	16.5
Specialist	356	58	16.3
Engineer	13	2	15.4
Accountant	21	3	14.3
Architect	8	1	12.5
Supervisor	8	1	12.5
Officer	9	1	11.1
Designer	11	1	9.1
Analyst	109	8	7.3
County Extension Education Director	64	4	6.3
Admin Specialist	96	5	5.2
Administrator	20	1	5.0
Associate	7	0	0.0
Total	1518	360	23.7

Pay grade. Position classification of professional staff at Iowa State University is accomplished through a pay grade category, each position being assigned a pay grade from 10-20. Since a pay grade of 10 is reserved for interns and similar mentoring positions, almost all professional positions range from 11-20. Each pay grade has a salary minimum and a salary maximum for the grade except for pay grade 20, which is open-ended. The pay grade variable was taken directly from the ISUHR database.

The chi-square test of independence for the independent variable pay grade and the dependent variable academic professional showed a statistically significant relationship but

one that was relatively weak according to the Cramér's V measure (Table 4.2). The percentage of academic professionals by pay grade categories is shown in Table 4.6. The four largest percentages of academic professionals are mainly found in pay grades 16-19.

Salary. The variable used for analyzing salary information of professional staff came directly from the ISUHR database. The salary variable was then recoded with five approximately equal frequencies. The chi-square test of independence for the independent variable salary and the dependent variable academic professional showed no statistically significant relationship (Table 4.2). The percentages of academic professionals by salary categories are shown in Table 4.6 with lower salaries categories showing greater than average percentages.

Grade depth. Grade depth is a characteristic of salary movement within the pay grade. Since salary increases are, in theory, a result of performance at Iowa State, this measurement should be seen as an indicator of performance. However, the time one has been in a pay grade to receive performance increases is also hypothesized as a factor in movement through the grade. The variable grade depth was computed from salary, minimum grade salary, and maximum grade salary yielding a percentage showing where the employee's salary currently resides within the pay grade. All of the input variables came directly from the ISUHR database. The resulting variable was then recoded into a final grade depth variable with five equal ranges from 0-100% plus a range of over 100% (a result of some manual outlier classifications by HR that are out of a pay grade range, for example, medical doctors at the health clinic).

The chi-square test of independence for the independent variable grade depth and the dependent variable academic professional showed a statistically significant relationship but

one that was relatively weak according to the Cramér's V measure (Table 4.2). The percentages of academic professionals by grade depth categories is shown in Table 4.6 with lower grade depths showing a larger percentage than the percentage for all academic professionals.

While pay grade, salary, and grade depth may seem to be separate variables measuring the same concept, each of them is somewhat independent of the others. Salary levels can bridge several pay grades and the grade depth can be from 0 to 100% within each pay grade. In fact, it is more probable that grade depth and length of time at ISU would show a much higher correlation than with pay grade or salary.

Term of employment. Professional staff at Iowa State are hired either on a continuous or term basis. The independent variable term employee was derived for analysis as either yes, on a term, or no, continuous, from the variable termination date which came directly from the ISUHR database. The chi-square test of independence for the independent variable term employee and dependent variable academic professional showed a statistically significant relationship and a relatively strong association as shown in Table 4.2. The percentage of academic professionals by term appointment is shown in Table 4.7 with those employees with a term contract having a very high percentage compared to those without term contracts.

Time at Iowa State. The variable years at ISU came from the ISUHR database after recoding the variable hiring date. The variable was recoded into five categories (corresponding to the scale of the years at Iowa State asked in the Professional Staff Survey) to create the final variable. The chi-square test of independence for the independent variable years at Iowa State and dependent variable academic professional showed no statistically

Table 4.6
Frequency and Percent of Academic Professionals by Pay Grade, Salary, and Grade Depth

	Response N	AP N	AP %
Pay Grade			
10	3	0	0.0
11	75	18	24.0
12	57	3	5.3
13	298	77	25.8
14	291	56	19.2
15	350	72	20.6
16	156	44	28.2
17	171	58	33.9
18	73	20	27.4
19	21	8	38.1
20	23	4	17.4
Total	1518	360	23.7
Salary (1,000s of \$)			
0-37	278	76	27.3
37-44	291	78	26.8
44-51	294	55	18.7
51-63	314	69	22.0
63-183	341	82	24.0
Total	1518	360	23.7
Grade Depth (%)			
0-20	262	86	32.8
21-40	503	125	24.9
41-60	361	71	19.7
61-80	222	42	18.9
81-100	115	22	19.1
100 and over	10	0	0.0
Total	1473	346	23.5

significant relationship (Table 4.2). The percentage of academic professionals by years at ISU categories is shown in Table 4.7 generally showing that the fewer years at ISU, the higher the percentage of academic professionals.

Time in higher education. A question was asked on the PS survey about the length of time a professional had worked in higher education. The research expectation for data from

this question was that the longer a professional has spent within higher education, the greater the likelihood of being involved in teaching or research.

The chi-square test of independence for the independent variable years in higher education and the dependent variable academic professional did not result in a statistically significant relationship (Table 4.2). The percentage of academic professionals by year categories is shown in Table 4.7 with years 5-14 showing a slightly greater than average percentage of academic professionals.

Table 4.7
Frequency and Percent of Academic Professionals by Term Appointment, Years at ISU, and Years in Higher Education

	Response <i>N</i>	AP <i>N</i>	AP %
Term Appointment			
Yes	276	123	44.6
No	1242	237	19.1
Total	1518	360	23.7
Years at ISU			
0-1	248	60	24.2
2-4	282	74	26.2
5-9	341	87	25.5
10-14	188	39	20.7
15-24	265	63	23.8
25 +	194	37	19.1
Total	1518	360	23.7
Years in Higher Education			
0-1	76	12	15.8
2-4	157	34	21.7
5-9	240	68	28.3
10-14	192	55	28.6
15-24	275	65	23.6
25 +	208	52	25.0
Total	1148	286	24.9

Funding. Information on professional staff funding came from the ISUHR database through a variable which contained the primary fund account through which each employee

is paid. To derive an independent variable for funding, the funding variable was recoded from the first digit of the account number that signified the larger aggregate of funds that are used at Iowa State University into the fund family. The chi-square test of independence for the independent variable funding family and the dependent variable academic professional showed a statistically significant relationship and a relatively strong association as shown in Table 4.2. The percentage of academic professionals by funding family categories is shown in Table 4.8 with the contract fund family showing a much greater than average percentage and all other funds below the average for academic professionals.

Highest degree earned. When discussing the variables needed for this study with a Human Resources data analyst at Iowa State, the variable describing highest degree earned was identified as possibly unreliable by the HR data analyst within the ISUHR database. This data had not been updated with new degrees outside of ISU unless an employee specifically asked for the update. Because highest degree was thought to have a possible major influence on a whether a professional staff member was involved in teaching, advising, or research, it was import to make sure this variable was correct for analysis. To obtain better data for highest degree earned, the question was asked as part of the PS survey.

The data collected from the survey respondents on the independent variable highest degree earned associated well with the dependent variable academic professional. The chi-square test of independence showed a statistically significant relationship with a relatively strong association as shown in Table 4.2. The percentage of academic professionals by highest degree categories is shown in Table 4.8. The percentages of employees with a master's, doctorate, or professional degree are all greater than the academic professional average of 23.9% with all degrees.

Table 4.8
Frequency and Percent of Academic Professionals by Funding and Highest Degree

	Response N	AP N	AP %
Salary Fund			
Special Program Appropriations	157	33	21.0
Self Supporting	395	54	13.7
Contracts	291	127	43.6
Federal Appropriations	87	13	14.9
General Univ. Funds	584	132	22.6
Total	1514	359	23.7
Highest Degree			
High School Diploma	52	2	3.8
Associate's Degree	58	1	1.7
Bachelor's Degree	605	84	13.9
Master's Degree	590	180	30.5
Doctorate Degree	135	73	54.1
Professional Degree (M.D., D.V.M., J.D., etc.)	40	13	32.5
Total	1480	353	23.9

Research question 3 and faculty relationships. One of the specific characteristics listed in research question 3 is the nature of relationship academic professionals have with faculty. To explore academic professional relationships with faculty, four related questions were asked in the PS Survey in the section titled “Working with Faculty.” These questions asked respondents to identify their working relationships with faculty by 1) how often they work with faculty, 2) rating their working relationships with faculty, 3) asking the respondent’s NTE faculty rank (although data for this question was ultimately taken from the ISUHR database), and 4) identifying their direct supervisor to discover how closely job responsibilities are enmeshed with faculty. The data from these questions are summarized below.

Frequency of faculty interaction. This first question from the survey in the “Working with Faculty” group focused on the amount of time professional staff spent working with

faculty members. The chi-square test of independence for the independent variable frequency of faculty interaction and the dependent variable academic professional showed a statistically significant relationship with a relatively strong association as shown in Table 4.2. The percentage of academic professionals by interaction categories is shown in Table 4.9 with those employees who work with faculty most often (daily or weekly) having a large, above average percentage compared to those who work with faculty less frequently.

Working relationship with faculty. This question asked respondents to rate their working relationships with faculty. The chi-square test of independence for the independent variable working relationship with faculty and the dependent variable academic professionals showed a statistically significant relationship, but one that was relatively weak according to the Cramér's V measure (Table 4.2). The percentage of academic professionals by relationship category (Table 4.9) shows those who have a very good relationship having a higher percentage of academic professionals. Although very few in number, those that have a poor or very poor relationship with faculty were also more likely to be academic professionals.

Faculty appointment. Data for faculty appointment and rank came from the ISUHR database. The database contained several variables dealing with the faculty status of professional staff including rank, start date, rank date, and primary, secondary, and tertiary levels where the appointment was given, both department and college. Faculty rank was selected from these variables and faculty appointment was a yes or no recode of rank.

The chi-square test of independence for the independent variable faculty appointment with the dependent variable academic professional showed statistically significant relationships with a relatively strong association as shown in Table 4.2. The percentages of

academic professionals by faculty categories are shown in Table 4.9 with the employee group having an NTE faculty appointment having a very high percentage of academic professionals compared to those without appointments.

Table 4.9
Frequency and Percent of Academic Professionals by Faculty Relationship Variables

	Response N	AP N	AP %
Frequency of Faculty Interaction			
I work with faculty at least once per day	532	174	32.7
I work with faculty at least once per week	366	108	29.5
I work with faculty at least once per month	227	32	14.1
I work with faculty less than once per month	239	31	13.0
I never work with faculty	118	9	7.6
Total	1482	354	23.9
Working Relationship with Faculty			
Very good	705	199	28.2
Good	501	108	21.6
Average	179	33	18.4
Poor	18	7	38.9
Very poor	3	2	66.7
Total	1406	349	24.8
Faculty Appointment			
Yes	78	57	73.1
No	1440	303	21.0
Total	1518	360	23.7
Supervisor Type			
P&S	869	124	14.3
Faculty	539	209	38.8
Both	58	22	37.9
Neither	52	5	9.6
Total	1518	360	23.7

Supervisor type. This question asked respondents to identify their direct supervisor to determine how closely job responsibilities are enmeshed with faculty. The chi-square test of independence for the independent variable supervisor type and dependent variable academic professional showed a statistically significant relationship with a relatively strong association

as shown in Table 4.2. The percentage of academic professionals by supervisory categories is shown in Table 4.9 with those employees who are supervised by faculty having a large average percentage of academic professionals compared to those who worked only for professional staff. This was the statistically strongest association of the faculty variables.

Analysis of Research Question 4

Research question 4 asks, “How did academic professionals secure their positions? Was it a matter of coincidence, a matter of deliberate career planning, or both?”

The data to find answers for this research question came from a section of Professional Staff Survey questions titled “Your Career” asking the respondents to identify perceptions of their own career paths. Survey questions included 1) original career plans for coming to ISU, 2) how close their professional work comes to their college major(s), 3) a measure of how well planned out their career paths have been, 4) whether respondents had ever been classified as a merit staff member or faculty, 5) their job satisfaction at ISU, and 6) a question asking staff to identify characteristics of their “ideal job” to gauge latent employment desires of professional staff in academic areas.

Original career intent. This question asked respondents about their original career plans for coming to ISU. The chi-square test of independence for each of the original career intent independent variables and the dependent variable academic professional showed statistically significant relationships with a relatively strong association, the strongest with research (Table 4.2). The percentage of academic professionals by original career intent categories is shown in Table 4.10. The career intents aligned with teaching, advising, and research all show a percentage much greater than the average for academic professionals.

The percentage of academic professionals whose original career intent did not include teaching, advising, or research, was very low at 7.1%.

Table 4.10
Frequency and Percent of Academic Professionals by Career Intent

	Response <i>N</i>	AP <i>N</i>	AP %
Teaching	233	106	45.5
Advising	123	82	66.7
Research	372	194	52.2
None	884	63	7.1

*responses for these questions not mutually exclusive

Career relationship to college major. This question asked respondents how close their professional work comes to their college major(s). The chi-square test of independence for the independent variable career relationship to college major and the dependent variable academic professional showed a statistically significant relationship, but one that was relatively weak according to the Cramér's *V* measure (Table 4.2). The percentage of academic professionals by relationship categories is shown in Table 4.11 with career relationships close or direct to their college major more likely to have a higher percentage of academic professionals.

Table 4.11
Frequency and Percent of Academic Professionals by College Major Relationship

	Response <i>N</i>	AP <i>N</i>	AP %
There is a direct relationship	719	196	27.3
There is a close relationship	407	99	24.3
There is a distant relationship	235	52	22.1
There is no relationship	116	9	7.8
Total	1477	354	24.1

Career progression. While the other questions in the "Your Career" section of the survey addressed different dimensions of an academic professional's career, the question

regarding career progression is the focus of research question 4. The question is a measure of how well planned the academic professional's career paths have been. The chi-square test of independence for the independent variable career progression and the dependent variable academic professional showed a statistically significant relationship, but one that was relatively weak according to the Cramér's V measure (Table 4.2). The percentage of academic professionals by career progression categories is shown in Table 4.12 with those whose careers are a result of deliberate career planning or a combination of career planning and coincidence having higher than average percentage of academic professionals.

Table 4.12
Frequency and Percent of Academic Professionals by Career Progression

	Response		
	<i>N</i>	AP <i>N</i>	AP %
A matter of coincidence	357	72	20.2
A result of deliberate career planning	165	42	25.5
A combination of coincidence and deliberate career planning	786	218	27.7
Follows departmental career progression	162	24	14.8
Total	1470	356	24.2

Past position. This question asked whether respondents had ever been classified as a merit staff member or faculty before their classification as professional staff. The chi-square test of independence for the independent variable past positions and the dependent variable academic professional showed a statistically significant relationship, but one that was relatively weak according to the Cramér's V measure (Table 4.2). The percentage of academic professionals by past positions categories is shown in Table 4.13 with those having previously served as a faculty member having a greater than average number of academic professionals though the frequency is very small.

Table 4.13
Frequency and Percent of Academic Professionals by Past Position

	Response <i>N</i>	AP <i>N</i>	AP %
merit employee	260	43	16.5
tenure track/tenured faculty member	13	5	38.5
both	1	0	0.0
neither	1244	312	25.1
Total	1518	360	23.7

Ideal job. This question asked staff to identify characteristics of their “ideal job” to gauge latent employment desires of professional staff in academic areas. The chi-square test of independence for each of the ideal job independent variables and the dependent variable academic professional showed statistically significant relationships with relatively strong associations. The strongest relationship was for academic professionals with ideal jobs being in teaching, advising, and research (Table 4.2). Although significant, the outreach and administration variables showed a weak relationship with academic professionals according to the Cramér’s *V* measure. The percentages of academic professionals by each of the ideal job categories are shown in Table 4.14. The ideal jobs of teaching, advising, and research had higher than average percentages of academic professionals along with outreach. Academic professionals were more likely to not report administration or support services as ideal jobs.

Table 4.14
Frequency and Percent of Academic Professionals by Ideal Job

	Response <i>N</i>	AP <i>N</i>	AP %
Teaching	459	181	39.4
Student Academic Advising	301	125	41.5
Research	509	223	43.8
Outreach	635	177	27.9
Administrative or support services	748	119	15.9

*responses not mutually exclusive

Summary

This chapter presented the data analysis and results of the study. The research questions of the study were again presented to frame the data analysis. The chapter described two main areas of work. The first major part of the analysis was the general descriptive characteristics of professional staff at Iowa State University as a result of the analysis of both the ISUHR data and the PS Survey and is reported in Appendix A. Each independent and dependent variable of the research is described in this appendix along with a descriptive analysis of the variable by population and respondents of the survey. An analysis of the differences in population and respondents' characteristics is also presented.

The second major part of the analysis and main focus of the chapter was concerned specifically with answering the research questions of the study and focused on professional staff who were identified by their responses in the PS Survey as those having a primary job responsibility in the teaching, research, and/or advising missions of the university – the academic professionals. For each research question, the variables that were used to answer each question were presented. A chi-square test of independence was performed for each independent variable in relationship to the dependent variable academic professional and the strength of their association tested using the Cramér's V statistic. Observations, significance, and patterns were noted for reference in the Discussion, Conclusions, and Implications chapter of this report where that data analysis is presented in light of the introduction, review of literature, and methodologies.

CHAPTER 5

FINDINGS AND CONCLUSIONS

Review of the Study

Academicians who spend time thinking and writing about the American research university often compare these institutions to living, breathing organisms that constantly reinvent themselves. Clark Kerr has come to symbolize this thinking for many through his writing on the multiversity in the 1960's (Kerr, 1963). The growth of the research university has had many consequences, one of which is the evolving workforce on which it depends. It was not long ago that the university relied upon its faculty for nearly all its needs.

With the growth and evolution of the university, however, came a need to specialize and free the faculty from some of the administrative burdens that kept them from their roles of teaching and research. The university began employing more and more administrators and professional staff to handle the tasks that the faculty could not, or would not, do to keep the university functioning (Rhoades, 1998).

The purposes of this study were to develop an understanding of the roles and responsibilities of these professional staff, especially those who have become involved in the academic and research missions at American research universities, and to reveal the degree to which these roles overlap with the roles and responsibilities of faculty.

Four research questions were developed to address these study purposes:

- 1) What roles and responsibilities in teaching, advising, and research overlap between professional staff and faculty at a research university?
- 2) Where in the university's colleges, departments, and/or administrative units does the overlap of professional staff and faculty responsibilities occur?

- 3) Which classifications of professional staff are most likely to be involved in the overlap of responsibilities with faculty and do these staff exhibit commonalities in demographics, job characteristics, or faculty relationships?
- 4) How did academic professionals secure their positions? Was it a matter of coincidence, a matter of deliberate career planning, or both?

The significance of this study lies in gaining a clearer sense of the characteristics of professional staff, focusing on those whose academic duties have historically been assigned to faculty at the research university. This knowledge will better allow university decision makers to frame and answer challenging academic, financial and cultural questions that occur as academic professionals augment traditional faculty roles within the university's academic mission. It will also aid in understanding how professional staff can be used most effectively to strive for university excellence.

The study is grounded in two related concepts of the evolving research university. First is Kerr's concept of the multiversity where the mission of the university expands to meet the needs of a growing and evolving society (1963). Second is Miner & Estler's concept of responsibility accrual where individuals or groups of staff gain knowledge and responsibility as the institution grows and evolves (1985). These two concepts, while not related in the literature, fit the model of the current research university well.

Other literature has touched on the subject of the professional staff member at the university but not to a considerable depth nor focused on the academic professional subset of this group of university employees. Much of this literature focuses on administrative costs and productivity of staff at the university. In university workforce studies the spotlight has

been on faculty to the exclusion of professional staff. In addition, there is a lack of a consistent definition of professional staff from institution to institution.

To answer the proposed research questions, this study used both secondary data analysis and survey methodology. Iowa State University served as the host institution for the study where human resources data on professional staff were analyzed along with a survey developed specifically to answer the research questions.

The human resources (ISUHR) data provided many characteristics of the population to be studied including basic demographic information, appointment type, service to ISU, work area, funding, academic credentials, and faculty rank. The Professional Staff (PS) Survey asked questions about respondent's job responsibilities, career path, faculty relationships, and other background information. Of 2,499 professional staff invited, 1,518 chose to participate and submit a completed survey for a response rate of 62%.

Findings Relative to the Research Questions

Through the analysis of the ISUHR database, the PS Survey, and the merger of the two, the following answers were found to the research questions.

Findings of Research Question 1

What roles and responsibilities in teaching, advising, and research overlap between professional staff and faculty at a research university?

Answering research question one set the boundaries for the remainder of the study by setting the dependent variable. A key question was "what characteristics describe the academic professional responsibilities as defined in this research?" In a previous study, Kane defined the academic professional purely by the fact that a professional staff member was involved in research as outlined by the study sponsors (2005). This definition not only was

too subjective, as the study used only research job titles to distinguish the population, but also used too narrow a definition of academic professionals because it only involved research – just a part of a faculty member’s responsibilities. To truly overlap the responsibilities of the faculty, a definition of an academic professional also had to include teaching and advising activities.

Early in the research process, it became clear that in order to gauge the responsibilities of professional staff that overlapped those of faculty two things needed to happen. First, a definition of what responsibilities could be used as a measure for academic work had to be created and second, professional staff would have to be asked if their jobs included these responsibilities. After input, consultation, and survey pre-testing, three specific responsibilities were defined for academic professionals that could give a good indication of overlapping roles with faculty. These were: teaching a credit or R-credit course (teaching), providing formal academic advising of students (advising), and being directly involved in a research project by planning and carrying out the actual research (research).

Next, questions and responses for the survey were formulated that would allow measurement of these indicators. These responses, “I teach for-credit or R-credit ISU courses,” “I formally advise ISU students academically (as an academic advisor or faculty committee member) ,” and “I perform sponsored research (through the Office of Sponsored Programs Administration, OSPA) ,” were considered the responsibilities which augmented traditional faculty responsibilities and defined the academic professional for the study. The three responses were included in a section of the survey which allowed respondents a total of 17 responses in five areas: teaching, advising, research, outreach, and administrative support.

The answers to the first research question, “What roles and responsibilities in teaching, advising, and research overlap between professional staff and faculty at a research university?” are specifically, teaching for-credit courses, formally academically advising students, and performing sponsored research. Those professional staff whose responsibilities included at least one of these activities were defined as academic professionals. These academic professionals included 360 of 1,518 professional staff members who responded to the survey or 23.7% of the professional staff. Of the 360 academic professionals who specified involvement in at least one of the three academic indicators, 77 specified two or more, and 11 responded that they had responsibilities in all three areas.

Findings of Research Question 2

Where in the university’s colleges, departments, and/or administrative units does the overlap of professional staff and faculty responsibilities occur?

This research question required an analysis of the 360 academic professionals and the primary work area to where they were assigned taken from the ISUHR database. The analysis showed that the distribution of work area for the professional staff as a whole and the subset of academic professionals was significantly different.

While academic professionals work in an all areas of the university, those areas where they were more likely to work included the Vice President for Research area, where many of the universities centers and institutes are located; all seven of the university’s colleges, where much of the academic work takes place; and Ames Lab / Institute for Physical Research and Technology, another research center on campus. All other areas, including all of the university’s support units, were areas where the likelihood of academic professionals working was less than that of the overall respondent group of professional staff.

Findings of Research Question 3

Which classifications of professional staff are most likely to be involved in the overlap of responsibilities with faculty and do these staff exhibit commonalities in demographics, job characteristics, or faculty relationships?

Answering research question 3 was the most involved because of the many characteristics that were included in the study. When the methodology for the study was being considered, a list of variables needed from the ISUHR data was requested. Looking back, these variables became the subset of all variables in the HR data which could be hypothesized as those that would have an affect or association with the dependent variable academic professionals. In addition, other independent variables that were not part of the HR data were added to the PS Survey. These too could be considered as variables hypothesized as having some association with academic professionals.

The first of these characteristics was job title, which was the first part of research question 3. Chi-square analysis of all the independent variables with the dependent variable academic professional showed that job title had the highest chi-square and Cramér's V values of all the variables tested. Therefore job title had a relatively strong association with whether a professional staff member was also an academic professional. Intuitively, this makes sense because the work an employee does and the responsibilities included in those jobs are frequently referenced by a job title. Specifically, titles including advisor, scientist, coordinator, research associate, and health specialist all had more likelihood of including academic professionals.

Other characteristics also proved to show strong associations with the dependent variable academic professionals as confirmed by the chi-square and Cramér's V statistical tests. These characteristics include (from strongest):

Work unit. The unit where the professional staff member is primarily assigned was the second strongest association. This variable was the subject of research question two and discussion of its significance was reported there.

Highest degree. The variable highest degree attained was the next strongest association. This association also makes sense intuitively – as an employee's academic credentials rise, so should the likelihood of being involved in the academic mission of the university. In both the ISUHR data variable and the PS Survey variable for highest degree, doctorate and master's degree holders show more likelihood of being an academic professional. In the survey, professional degrees also join this list.

Funding. The funding account family from which a professional employee is primarily paid also showed a strong association with academic professionals. Specifically, if a professional is paid from contracts (associated with sponsored research) there is a greater likelihood of being an academic professional than if funding came from other university funding streams. This makes sense as the contracts for sponsored research are being carried out by the employees doing the research – one of the three indicators for academic professionals.

Term appointment. Having a term appointment was also shown to have a strong association with whether a professional staff member was considered an academic professional. Those who hold a term appointment (from 1-3 years at Iowa State) have a higher likelihood of being an academic professional.

The chi-square analysis of independent and dependent variables also produced another group of characteristics showing some association, but an association that was relatively weaker according to the Cramér's V statistic. These characteristics included race, age, pay grade, and grade depth. Six other characteristics, gender, marital status, dependent children, salary, years at ISU, and years in higher education showed no association with the dependent variable academic professional.

One classification grouping important enough to have its own section of the PS Survey was relationship with faculty. Of the five independent variable characteristics investigated, three showed strong associations with academic professionals and two showed weak associations.

Faculty appointment. Faculty appointment status was obtained from the ISUHR database. This characteristic showed a relatively strong association with academic professionals – those professional staff with a non-tenure-eligible appointment have a much greater likelihood of also being an academic professional.

Supervisor type. The type of supervisor a professional staff member had showed a relatively strong relationship to academic professional status. Those staff that have a faculty member as a supervisor had a greater likelihood of being an academic professional.

Frequency of faculty interaction. The amount of time a professional staff member interacts with faculty also showed a relatively strong association in the chi-square statistical tests. Those professional staff who interact with faculty on a daily or weekly basis had a greater likelihood of also being academic professionals. However, the type of relationship that professional staff have with faculty members showed a relatively weak association.

In summary, the answers to research question 3, “Which classifications of professional staff are most likely to be involved in the overlap of responsibilities with faculty and do these staff exhibit common characteristics?” are as follows. First, the job classifications of advisor, scientist, coordinator, research associate, and health specialist are most likely to augment traditional faculty responsibilities. Second, the characteristics most likely to be shared by these academic professionals are: in the academic unit of the university where they work; holding a master’s, doctorate, or professional degree; funded by research contracts; having term appointment status; having non-tenure-eligible faculty rank; the amount of time they spend with faculty; and having a faculty supervisor.

Findings of Research Question 4

How did academic professionals secure their positions? Was it a matter of coincidence, a matter of deliberate career planning, or both?

Answering this research question required an analysis of a section of the Professional Staff Survey titled “Your Career.” For the survey question “Thinking about your career progression at ISU, would you describe it as: a matter of coincidence, a result of deliberate career planning, a combination of coincidence and deliberate career planning, or follows departmental career progression?” the chi-square test showed an association between this career variable and academic professional status, but one that was weak. Individual responses showed that when a staff member has deliberately planned a career or when deliberately planned along with some coincidence there was a greater likelihood of being an academic professional. In comparison, total coincidence or departmental progression in career planning had a lower likelihood of being an academic professional.

Several other career questions showed a stronger association, however.

Original career intent. When asked about original career intent there was a strong association for those who came to Iowa State with intent to be involved in teaching, advising, and/or research to be academic professionals. There was an even stronger association for those who did not originally want to be involved in those aspects of the university to not be academic professionals.

Career relationship to college major. When respondents were asked how close their career was to their college major, the chi-square analysis showed a relatively weak association with the dependent variable academic professional. Those who responded that there was a direct or close relationship were more likely to be academic professionals. Those who said distant or no relationship were less likely to be academic professionals.

Ideal job. Lastly, a question was asked about a respondent's ideal job. Teaching, advising, and research as an ideal job all showed a strong association with academic professionals.

Conclusions

Research Results

This study focused on characteristics of the population of professional staff, respondents of the Professional Staff Survey, and those professional staff that have responsibilities central to the university's academic mission. The results of this research show that 23.7% of survey respondents are involved in a job responsibility that has traditionally been carried out by the tenure-eligible faculty of the institution. These academic professionals augment the faculty in their teaching, advising, and research responsibilities.

With so much invested in a professional staff, and so many of them involved deeply in the academic mission of the university, it is important to understand the composition of

this workforce. This research study surveyed characteristics of all professional staff, and identified characteristics of those that were significant indicators of their involvement in teaching, advising, and research at Iowa State. These indicators generally describe the work academic professionals do, where they do their work, and who they are.

The results of the study show that academic professionals are involved in teaching for-credit courses, formally advising students academically, and conducting sponsored research. The majority of the work they perform is accomplished in the main academic areas of the university – its centers, institutes, and colleges. Generally speaking, academic professionals are most likely advisors, scientists, coordinators, research associates, and health specialists. They usually hold a master's, doctorate, or professional degree. Many are funded by research contracts, have term appointment status, and have non-tenure-eligible faculty rank. Academic professionals usually spend significant amounts of time working with faculty including having a faculty supervisor. They came to the university wanting to be involved in the academic mission and would like to continue their work in that area.

There were a few surprises in the research. Of the independent variables selected from the ISUHR database and asked in the PS Survey, many of them, described above, showed a strong association with the independent variable academic professional as hypothesized (by being selected for the study). Other independent variables showed only a weak relationship, however, including race, pay grade, quality of working relationship with faculty, career relationship to major, and career progression. A few of the variables showed no significant relationship to being an academic professional including gender, age, marital status, dependent children, salary, years at ISU, and years in higher education. In these areas,

academic professionals do not look significantly differently than the population of professional staff at large.

Addressing the Limitations of the Study

Throughout the research process, several limitations presented themselves as discussed in the Introduction and Methodology chapters. Each of these limitations, and how each was handled, is described below starting with general limitations and concluding with more methods-related limitations. Every possible strategy to negate or eliminate these limitations or biases was taken in planning, implementing, analyzing, and sharing this research.

Limited to professional staff. From the very beginning of the study, even with deciding on the title, this research involved the intersection of two groups of employees at the university – the professional staff and the faculty. However, except for a few brief sections, the subject of the faculty was not studied or discussed in any great detail. This did not detract from the study, however, as the research was focused on the professional staff and academic professionals specifically.

One of the conclusions of the research is that time spent with faculty and supervision by faculty are two significant associations with academic professionals. Although there was not much time allotted to the professional staff / faculty relationship in this study, future study of academic professionals should include much more attention to the subject.

Definitions and typology. Study of higher education professional staff has been limited in the past by lack of definition of the group. The best standard typology to this point is the classification of staff in the Integrated Postsecondary Education Data System (IPEDS) data (U.S. Department of Education, 2006). Where data on professional staff have been

quantified and compared, it has come through the IPEDS classification. However, early in this research there was a realization that this existing classification system would not facilitate the purpose of the study or answer the research questions. To frame the typology for this study, two classifications were used. First, professional staff were defined by both the Iowa State and University of Arizona classifications (Appendix B). Second, the classification of an academic professional was defined by type of work which overlapped traditional faculty responsibilities. Respondents were classified in this framework through the PS Survey. The limitation of unstandardized classification systems may again become a problem if future research on this topic is implemented across institutions without proper planning.

Limited to a single institution. While much of the discussion of analysis and results in the preceding sections might suggest a global scope of “professional staff “ and “academic professionals,” it is important to realize that this study examined just one institution, Iowa State University. While conclusions may be applicable to other universities, and indeed early in this report the framing of Iowa State as a representative university was discussed, in the end the analysis is only valid for this one institution.

Should this limitation be perceived as a weakness in the study? It could. However, just as the gap of data and literature about professional staff could be perceived negatively as a lack of knowledge or positively as an opportunity to fill the gap, the focus on one institution should be perceived as a starting point from which more study of this topic can be launched.

Researcher bias. As explained in the Introduction, the author of this study has been a professional staff member, held a leadership position in its governance, and has an academic

interest in studying this group of higher education professionals. Given that, he is also a researcher who understands the critical separation of researcher and subject in the research process. Researcher bias in this study was minimized by using a quantitative methodology, a concerted attempt to vet research proposals, methods, and results, and by clearly pointing out researcher and research associations.

Self-reporting. Because of the nature of the survey methodology used in this study, self reporting of respondents was identified as a potential problem. Issues including respondents attempting to make themselves look better, expressing answers without devoting much thought to the questions, intentionally misrepresenting facts, along with others (Leedy & Ormrod, 2005) were factored into the analysis of the survey. Solutions to this problem as well as other reliability and validity issues are discussed below.

Reliability and validity. In any survey research methodology it is important to test measures of reliability and validity (Groves et al., 2004). In this study reliability and validity were dealt with in four ways. First, the survey was pretested four times. Along with expert input, this pretesting phase resulted in nine versions of the survey which was only then sent out for response.

Second, several questions were matched with national data sets of a similar respondent population, that being faculty. Appendix A reports on the PS Survey variables marital status and dependent children that were virtually replicated from the National Study of Postsecondary Faculty (NSOPF, 2004). The response to these variables showed similar characteristics.

Third, the PS Survey asked questions that produced self-reported data that could be compared with data from the ISUHR database. The variables highest degree, years at ISU,

and faculty rank were compared between the two data sets and are also reported in the Data Analysis and Results. These variables showed mostly favorable comparison but also showed differences that might be explained by updated reporting, as in the case of updated higher degree in the PS Survey.

Fourth, reliability can be checked by item non-response (Groves et al., 2004). Only one question, years spent in higher education, had any significant item non-response (not answering a question) with 370 missing responses compared to its partner questions, years spent at ISU, which had only 47 missing responses.

Relationship to Previous Research

While drawing on previous research focusing on professional employees, in the end, there was not a large amount of comparable research to draw from. However, the search for relevant research was discovery in itself. To read the literature on professional staff, even that on the periphery of this research focus, gave credence to the need to fill a void in the area of university workforce research. As discussed earlier, this gap of research on higher education professionals was perceived as an opportunity to add to the literature.

Of the previous literature used to build the research case for this study, the work of Rhoades (1998, 2001), Rosser (2000, 2004), Johnsrud (2003, 2004) , and Johnsrud and Rosser (2000) were the most influential for laying the research foundation. Finding these, and earlier studies by Scott (1980) and Liebmann (1986), gave added confidence from external experts that this, indeed, was a subject requiring serious study. Hopefully this research builds a credible case from previous research forward to new studies that will tie together more knowledge about university professional staff.

Recommendations for Further Research

The limitations discussion addressed several areas for future research on professional staff and academic professionals.

Faculty interaction. The findings of this research show that academic professionals have a greater likelihood of a close interaction with faculty than professional staff in general. Future research should include what that relationship looks like, and perceptions of the relationship from faculty and administration points of view. In addition, because such a large proportion of academic professionals are involved in research, the question, “should there be a new emphasis on a Research Faculty appointment at universities where this faculty rank does not exist?” should be investigated.

Expanding the study to other universities. One of the more important future studies could be exploring if this type of analysis of professional staff is relevant at other research universities. Are similar universities facing similar issues to Iowa State? Specifically, is the overlap of teaching, advising, and research responsibilities an issue elsewhere? If so, does university classification matter? Does the existence of a hospital or large health unit matter? Similar classification of professional staff across universities will again be an issue. It may be possible to use the College and University Professional Association for Human Resources (CUPA-HR) as a united classification system.

Other research characteristics. Looking back at this research, an unstated hypothesis was formed when independent variables were selected from the ISUHR database and chosen to be included in the PS Survey. That hypothesis was that the selected variables would show associations with the dependent variable professional staff. Through statistical analysis, these independent variables were shown to have relatively strong association, relatively weak

associations, or non-significant associations. But were these the only variables that should have been selected? Are there other characteristics of professional staff that were not tested that could show significance? Future research could address these questions.

In addition, there was an abundance of data collected on professional staff for this study that was not used to answer the research questions. Further understanding of professional staff could be made by a more thorough analysis of job satisfaction data, job responsibility data beyond the characteristics used to determine the academic professional subset or work performed outside official job responsibilities. Also, there is a wealth of data about surveying professional staff, a group not well represented in survey methodology literature. Another good prospect for future research would be combining the PS Survey data with data that is being collected from another professional staff survey in the Spring of 2007 at Iowa State University pertaining to work life and benefit issues. This merged data could result in an even richer data set on professional staff at Iowa State University.

Recommendations for Practice

There are many significant issues currently facing higher education. Many of them, at their root, have a need to better understand the higher education workforce. In the past, this workforce could be, and was, defined as the faculty. But as professional staff have more responsibilities in management of the university, whether it be budgeting, recruiting students, supporting teaching and research, running the physical and information technology infrastructure, that definition surely needs to be expanded to address what Rhoades calls the cultural split in higher education personnel -- “the faculty and the “t’aint” (it ain’t) faculty” (1998, p. 112).

One of the high priority issues in higher education identified by many academics is “the evolution of a two-tier system of faculty, with full and part time members” (Gregorian, 2005, p. 78). This evolution also carries with it some contention with tenure/tenure-eligible and non-tenure-eligible faculty. At Iowa State, each year, the Faculty Senate calls on the Provost’s Office to prepare a report on teaching by non-tenure-eligible faculty. While the Senate would like to see the NTT teaching proportion drop to meet AAUP guidelines, there is a tenuous relationship with funding at the university. This is highlighted in the Faculty Senate minutes of April 25, 2006 when the 2006 report was submitted from the Provost to the Senate:

Provost Allen then provided a report on the teaching done by NTT faculty, based on the 2002 AAU guidelines (limited to 15% of total instruction; 25% within a department). He did remind the Senate to consider these numbers in the context of budget cuts (Iowa State University Faculty Senate, 2006).

This is just one example of the type of issues that are associated with workforce resources within higher education that impact both professional staff and faculty. While this particular issue deals with staff with faculty rank – be it TTE or NTTE, other areas of higher education workforce overlap, like those described in this study, overlap of professional staff and staff with union representation, or faculty and graduate assistants, will all create their own tensions in the higher education workforce.

At the outset of this study, the statement was written that “This study’s importance lies in an understanding of both the professionals who carry out these [academic and research] responsibilities and also in understanding how these [academic professional] staff can be utilized most efficiently for the overall excellence of the university they serve.”

Determining the underlying structure of professional staff who do academic and research work at a research university is the first step of what could lead to important findings and discussions toward the proper balance of human resources for the academic workplace. These resources include administration, faculty, professional staff (including academic professionals), classified staff, graduate and undergraduate student employees (Iowa State University, 2007), and the roles and responsibilities of each as the multiversity continues to evolve.

These findings should be especially useful for higher education administrators who must make staffing decisions and for faculty colleagues who work closely with these academic professionals – all are working toward the same academic goals. Academic professional staff also should find this study useful since currently there is no structured professional development process to prepare them for careers in the academic mission of the university. Once only faculty, tutored through the academic guild of graduate student and mentee, junior faculty, and tenured faculty member, carried out the teaching and research missions of the university. With the expanding role of academic professional staff in teaching, advising, and research, more professional development opportunities outside of the faculty development system must be created.

Summary

One of the primary forces behind this research was the desire to paint a picture of professional staff at the research university where administrators, faculty, and even other professional staff could respond “oh, that’s what professional staff look like.” Even though the background of this painting is of one university, it is a picture that can start to describe a population of university employees to create a better, more common understanding of a

significantly understudied group. This new picture – this new understanding – can be of significance for both the practice of, and research in, higher education.

The final question posed by this research is, “were the purposes of the study realized?” First, was an understanding of the roles and responsibilities of professional staff developed? Although not part of the research questions for the study, an understanding of the population of the professional staff at Iowa State had to be outlined before proceeding with the subset of staff involved in the academic mission of the university. This understanding was accomplished through a descriptive analysis of the variables in the ISUHR database and the Professional Staff Survey. This overall view of the professional staff at Iowa State, found in Appendix A, is a very beneficial product of this study that can be used for a variety of planning purposes by professional staff, faculty, and the administration.

Second, was an understanding of the roles and responsibilities of academic professionals involved in the academic and research missions of the American research university developed? The answer to this question is yes... and no. Yes, the ISUHR database and PS Survey analysis identified these academic professionals and determined significant associations with some of the independent variables in the study. We now have an understanding of the general characteristics of this group that can be used for a variety of purposes. The answer is also no, the results of this research can't necessarily be generalized to other American research universities. Although a case was made that Iowa State could be used as a proxy for other research universities without hospitals, without calibration of the results with other universities, generalization of results should not be made.

Third, did the research help develop an understanding of the degree to which these roles overlap with faculty roles and responsibilities? The answer to this question could

depend on the reader's perspective. This research defined the overlap of the academic professional and the faculty from the perspective of the researcher. The degree of the overlap and the characteristics of the academic professionals who do the overlapping have been described. However, it is understood that this definition may be interpreted by others differently. Were the responsibilities defined correctly? Who should ultimately define the responsibilities? Do respondents actually perform the responsibilities they reported?

Questions like these, and others, will undoubtedly arise from this research. The debate over the answers may provoke disagreement but the results of the discussion will only strengthen the institution. As stated in the introduction to this research, the significance of this study was to discover "knowledge [that] will better allow university decision makers to frame and answer challenging academic, financial and cultural questions that occur as academic professionals augment traditional faculty roles within the university's academic mission."

APPENDIX A

General Descriptive Characteristics of Iowa State University
Professional Staff and Professional Staff Survey Respondents

The data analysis in this study began with an examination of descriptive statistics covering the demographics of the research subjects (independent variables). For this study, independent variables were collected from both the Iowa State University Human Resources (ISUHR) database and the Professional Staff (PS) Survey itself.

This analysis was preliminary to the analysis of the research questions of the study and so it is reported here in Appendix A rather than in the Data Analysis and Results chapter. However, reporting these results on professional staff at Iowa State University for publication and distribution is a central product of this dissertation.

Comparison of Population and Survey Respondent Characteristics

Use of the ISUHR database allowed a comparison of characteristics between the population of professional staff and the PS Survey respondents for each independent and dependent variable in the study. An analysis was completed to look for nonresponse bias from the sample and how that might affect further data analyses as the research progressed. A complete list of variables from the HR database (and the PS Survey) is located in Appendix F.

Overall response. Of the 2,449 professional staff that were sent invitations to participate in the survey, 1,518 completed the survey, a response rate of 62.0 percent. In addition, 226 invitees formally declined to take the survey through the survey response process, or 9.2 percent of invitees. Thus, a total of 71.2 percent of the professional staff

responded either positively by taking the survey or by formally declining to take the survey. This left 28.8 percent of professional staff where no response was received (see Table A.1).

Table A.1
Survey Response

	Frequency	Percent
Responded	1518	62.0
Declined	226	9.2
No Response	705	28.8
Total	2449	100.0

Response / nonresponse bias. Before comparing population characteristics of professional staff with those who chose to complete a survey, testing was done to determine if significant patterns of unit nonresponse could be detected (Groves, 2004). An analysis using the chi-square test of independence was completed for the ISUHR independent variables and the survey response variable (whether each professional staff member had completed a survey). The chi-square test was used based on the categorical nature of both variable types. The analysis, reported in Table A.2, identified several variables tested that statistically significantly (tests of statistical significance in this study use $p < 0.05$).

While several of the chi-square tests of the variables in the study showed a statistical significance, an additional statistical test, Cramér's V (V) nominal symmetric measure, was used to measure strength of relationship between the independent and dependent variables of the crosstabulations in the study. The value of Cramér's V ranges from 0 to 1 and indicates the proportional reduction in error in predicting the value of one variable based on the value of the other variable. Low values for the test statistic indicate that the relationship between the two variables is a fairly weak. Cramér's V corrects for table size and is appropriate for tables that are larger than 2 x 2 and when both variables are nominal, categorical variables

(SPSS, 2003). The statistic can be difficult to interpret and is relative to similar variables and table sizes (Norusis, 1999). However, some have tried to standardize the value of V (Smith, 2007). Adapted from these sources, the threshold for a weak association in this study was $V < 0.200$. Accordingly, all associations for the ISUHR independent variables and the survey response variable (whether each professional staff member had completed a survey) were considered weak, an indication that unit non-response was minimal.

Table A.2

Chi-Square Analysis of the Population and Survey Respondents

Independent Variables ISUHR (n=2449)	Dependent variable, Response (y/n)			
	χ^2	df	p	V*
Gender	27.245	1	0.000	0.105
Race	19.465	4	0.002	0.089
Age	4.227	4	0.376	
Job Title	90.315	21	0.000	0.192
Pay Grade	19.513	10	0.034	0.089
Salary	16.001	4	0.003	0.081
Grade Depth	11.043	6	0.087	
Term Appointment	1.365	1	0.243	
Years at ISU	12.761	5	0.026	0.072
Area Name	84.357	19	0.000	0.186
Salary Fund	52.815	5	0.000	0.147
Highest Degree	20.204	7	0.005	0.091
Faculty Rank	8.076	6	0.326	
Faculty Appointment	1.747	1	0.186	

* Cramér's V nominal symmetric measure

Demographic Characteristics: The ISUHR Database

Each of the independent variables in the ISUHR database are discussed for the population of professional staff at Iowa State as well as the respondents of the Professional Staff Survey below. These variables were selected based on the hypothesis that they could have an affect on the dependent variable in the research questions, academic professionals.

Gender. The independent variable gender was analyzed directly from the ISUHR database. Of the 2,449 professional staff, females make up 51.7% of the population while males make up 48.3%. This compares to survey respondents who were 55.9% female and 44.1% male, meaning females more likely than males to respond to the survey with a 66.9% response rate versus 56.7% for males (Table A.3).

Race. The independent variable race was analyzed directly from the ISUHR database. Of the 2,449 professional staff, the percentage of people of color is 9.3%. This compares to 7.6% of survey respondents who reported themselves as people of color. The category of Asian or Pacific Islander was the least well-represented in the survey with a 45% response rate compared to the overall response rate of 62% (Table A.3).

Table A.3
ISUHR Independent Variables Comparing Population of Professional Staff and Survey Respondents: Gender, Race, and Age

	Population Frequency	Percent	Response Frequency	Percent	Response Rate
Gender					
Female	1267	51.7	848	55.9	66.9
Male	1182	48.3	670	44.1	56.7
Race					
African-American and Black, not Hispanic Origin	51	2.1	27	1.8	52.9
American Indian or Alaskan Native	6	0.2	4	0.3	66.7
Asian or Pacific Islander	131	5.4	59	3.9	45.0
Latino or Hispanic	39	1.6	26	1.7	66.7
White, not Hispanic Origin	2222	90.7	1402	92.4	63.1
Age					
22-33	468	19.1	274	18.1	58.5
34-41	454	18.5	276	18.2	60.8
42-48	506	20.7	316	20.8	62.5
49-54	505	20.6	324	21.3	64.2
55-75	516	21.1	328	21.6	63.6
Total for each group	2449		1518		62.0

Age. The variable birth year from the ISUHR database was first recoded into age and then into five age groupings with approximately equal frequencies for analysis. Variation in each category from the population to the survey respondents was minimal (Table A.3). The average age of the population is 44.7 years old while respondents averaged 45.0 years.

Job title. The independent variable job title family was recoded to reflect aggregated categories of the original ISUHR database variable job title. The population comparison with

Table A.4
ISUHR Independent Variables Comparing Population of Professional Staff and Survey Respondents: Job Title

Job Title Family	Population		Response		Response Rate
	Frequency	Percent	Frequency	Percent	
Administrator	23	0.9	20	1.3	87.0
Administrative Specialist	128	5.2	96	6.3	75.0
County Extension Ed Dir	89	3.6	64	4.2	71.9
Program Coordinator	278	11.4	198	13.0	71.2
Advisor	77	3.1	54	3.6	70.1
Coordinator	30	1.2	21	1.4	70.0
Director	110	4.5	76	5.0	69.1
Analyst	162	6.6	109	7.2	67.3
Manager	207	8.5	139	9.2	67.1
Program Asst	154	6.3	98	6.5	63.6
Specialist	597	24.4	356	23.5	59.6
Health Professional	19	0.8	11	0.7	57.9
Officer	16	0.7	9	0.6	56.3
Architect	15	0.6	8	0.5	53.3
Research Associate	122	5.0	63	4.2	51.6
Supervisor	16	0.7	8	0.5	50.0
Accountant	43	1.8	21	1.4	48.8
Health Specialist	34	1.4	16	1.1	47.1
Associate	15	0.6	7	0.5	46.7
Scientist	259	10.6	120	7.9	46.3
Engineer	29	1.2	13	0.9	44.8
Designer	26	1.1	11	0.7	42.3
Total	2449		1518		62.0

the respondents showed that some of the titles one would expect to be associated with an academic professional drew somewhat lower response rates than the average rate. These included the scientist series at 46.3% compared to the average response rate of 62% (Table A.4). The overall response rate for the study and the large n for the group alleviate any concerns, however.

Pay grade. Position classification of professional staff at Iowa State University is accomplished through a pay grade category, each position being assigned a pay grade from 10-20. Since a pay grade of 10 is reserved for interns and similar mentoring positions, almost all professional positions range from 11-20. Each pay grade has a salary minimum and a salary maximum for the grade except for pay grade 20 which is open-ended. The analysis of the independent variable pay grade, taken directly from the ISUHR database showed that there was a tendency for a higher response rate as the pay grade increased, with the top response rate of 79.3% occurring at the top pay grade, 20 (Table A.5).

Salary. The independent variable used for analyzing salary information of professional staff is a recoded variable of salary which came directly from the ISUHR database. The recoded salary variable has five approximately equal frequencies. Although there is little difference between these categories from the population to the respondents, there is a definite pattern showing that as salary increases, response rates also increase (Table A.5).

Grade depth. Grade depth is a characteristic of salary movement within the pay grade. Since salary increases are in theory a result of performance at Iowa State, this measurement can be seen as an indicator of performance and the time one has been in a pay grade to receive those performance increases. The variable grade depth was computed from

Table A.5
ISUHR Independent Variables Comparing Population of Professional Staff and Survey Respondents: Pay Grade, Salary, and Grade Depth

	Population		Response		Response Rate
	Frequency	Percent	Frequency	Percent	
Pay grade					
10	6	0.2	3	0.2	50.0
11	143	5.8	75	4.9	52.4
12	103	4.2	57	3.8	55.3
13	509	20.8	298	19.6	58.5
14	460	18.8	291	19.2	63.3
15	532	21.7	350	23.1	65.8
16	240	9.8	156	10.3	65.0
17	275	11.2	171	11.3	62.2
18	114	4.7	73	4.8	64.0
19	38	1.6	21	1.4	55.3
20	29	1.2	23	1.5	79.3
Salary					
0-37	494	20.2	278	18.3	56.3
37-44	485	19.8	291	19.2	60.0
44-51	477	19.5	294	19.4	61.6
51-63	491	20.0	314	20.7	64.0
63-183	502	20.5	341	22.5	67.9
Grade depth					
0-20	454	18.5	262	17.3	57.7
21-40	812	33.2	503	33.1	61.9
41-60	595	24.3	361	23.8	60.7
61-80	324	13.2	222	14.6	68.5
81-100	175	7.1	115	7.6	65.7
100 and over	15	0.6	10	0.7	66.7
missing	74	3.0	45	3.0	60.8
Total for each group	2449		1518		62.0

salary, minimum grade salary, and maximum grade salary yielding a percentage showing where the employee's salary currently resides within the pay grade. All of the input variables came directly from the ISUHR database. The resulting variable was then recoded into a final grade depth variable with five equal ranges from 0-100% plus a range of over 100% (a result of some manual outlier classifications by HR that are out of a pay grade range, for example,

medical doctors at the health clinic). The comparison between the population's grade depth and the respondent's grade depth shows minimal differences (Table A.5).

Term of employment. Professional staff at Iowa State are hired either on a continuous or on a term basis. The independent variable term employee was derived for analysis as either, yes on a term, or, no continuous, from the variable termination date which came directly from the ISUHR database. Table A.6 shows there is minimal difference in this variable from those in the population and those who responded to the survey.

Time at Iowa State. The variable years at ISU came from the ISUHR database after recoding the variable hiring date. The variable was recoded into five categories (corresponding to the scale of the years at Iowa State asked in the Professional Staff Survey) creating the new independent variable years at ISU. Analysis of this variable shows that there is minimal difference between the population and respondents with no apparent pattern (Table A.6).

Unit of employment. The ISUHR database contains information on the unit of employment for each professional staff member. The variable directory department code number contained the code for each department of employment. The first two digits of this code represented an aggregate of those departments into major units. The variable was recoded to include only the first two digits resulting in the variable area name code. The resulting units were then assigned their aggregate unit name and recoded into the independent variable area name. In the analysis of responses from the population, most of these units had minimal differences (Table A.6). Two, however, stand out as being areas of relative low response rates: the Plant Sciences Institute (PSI) at a 42.9% and Ames

Lab/Institute for Physical Research and Technology (IPRT) at 37.3%. The overall response rate for the study alleviates any concerns, however.

Table A.6
ISUHR Independent Variables Comparing Population of Professional Staff and Survey Respondents: Term, Years at ISU, and Unit Name

	Population		Response		Response Rate
	Frequency	Percent	Frequency	Percent	
Term employee					
Yes	463	18.9	276	18.2	59.6
No	1986	81.1	1242	81.8	62.5
Years at ISU					
0-1	426	17.4	248	16.3	58.2
2-4	462	18.9	282	18.6	61.0
5-9	524	21.4	341	22.5	65.1
10-14	311	12.7	188	12.4	60.5
15-24	446	18.2	265	17.5	59.4
25 +	280	11.4	194	12.8	69.3
Unit name					
Provost's Office	45	1.8	39	2.6	86.7
Library	24	1.0	19	1.3	79.2
College of Design	24	1.0	18	1.2	75.0
Information Technology Services	160	6.5	115	7.6	71.9
VP Research	162	6.6	111	7.3	68.5
College of Business	31	1.3	21	1.4	67.7
College of Engineering	94	3.8	63	4.2	67.0
VP Business & Finance	191	7.8	126	8.3	66.0
College of Human Sciences	118	4.8	77	5.1	65.3
President's Office	100	4.1	65	4.3	65.0
Coop Extension Service	347	14.2	223	14.7	64.3
Facilities Planning & Mgmt	82	3.3	52	3.4	63.4
Center for Indust Res and Service	27	1.1	17	1.1	63.0
College of Agriculture	293	12.0	183	12.1	62.5
College of Liberal Arts & Sci	135	5.5	77	5.1	57.0
College of Vet Medicine	109	4.5	62	4.1	56.9
VP Student Affairs	237	9.7	134	8.8	56.5
Ag Experiment Station	87	3.6	47	3.1	54.0
Plant Sciences Institute	14	0.6	6	0.4	42.9
Ames Lab/IPRT	169	6.9	63	4.2	37.3
Total for each group	2449		1518		62.0

Funding. Information on professional staff funding came from the ISUHR database through a variable named funding account which contained the primary fund account through which each employee is paid. To derive an independent variable for funding, the funding variable was recoded from the first digit of the account number that signified the larger aggregate of funds that are used at Iowa State University into fund family. The difference within this variable between the population and respondents was minimal with a slightly lower rate of response from contract funded staff (funding code 400) at 52.4% and slightly greater than average rate of response from general university funded staff (funding code 700) at 70.7% (Table A.7).

Highest degree earned. The ISUHR database contained the variable highest degree earned where a variety of different types of degrees were assigned as the highest degree attained by each staff member. Since there was such a variation in degree types, a request was made to HR for a coding sheet that showed each of these degrees recoded into major types of degrees from high school to doctorate. The degrees in the database were then recoded into the independent variable degree code. Analysis of this variable showed minimum difference from the population to those responding to the survey (Table A.7). HR indicated concern about up-to-date tracking of this variable so it was also asked in the PS Survey to check validity. The classification of this variable is covered later in this chapter.

Faculty rank. The last two independent variables taken from the ISUHR database dealt with faculty appointment and rank. The database contained several variables dealing with the faculty status of professional staff including rank, start date, rank date, and primary, secondary, and tertiary levels where the appointment was given, both department and college. Faculty rank was selected from these variables. Analysis showed a wide variation

mainly due to the ranks being split up by a small pool (n=115) of professionals having faculty rank. The larger aggregate, faculty appointment recoded as yes or no from faculty rank showed the response rate of those with some type of faculty rank was minimally different than the population (Table A.7).

Table A.7
ISUHR Independent Variables Comparing Population of Professional Staff and Survey Respondents: Funding, Highest Degree, and Faculty Rank

	Population		Response		Response Rate
	Frequency	Percent	Frequency	Percent	
Fund family					
100 Special Program Approp.	242	9.9	157	10.3	64.9
200 Self Supporting	673	27.5	395	26.0	58.7
400 Contracts	555	22.7	291	19.2	52.4
600 Federal Appropriation	145	5.9	87	5.7	60.0
700 General University Funds	826	33.7	584	38.5	70.7
missing	8	0.3	4	0.3	50.0
Highest degree					
High School	152	6.2	92	6.1	60.5
Certificate	4	0.2	2	0.1	50.0
Associates	60	2.4	34	2.2	56.7
Bachelors	994	40.6	611	40.3	61.5
Masters	841	34.3	563	37.1	66.9
Professional	31	1.3	16	1.1	51.6
Doctorate	266	10.9	146	9.6	54.9
missing	101	4.1	54	3.6	53.5
Faculty appointment					
Yes	115	4.7	78	5.1	67.8
No	2334	95.3	1440	94.9	61.7
Faculty rank					
No Faculty Rank	2334	95.3	1440	94.9	61.7
Temp Instructor	1	0.0	0	0.0	0.0
Lecturer	53	2.2	39	2.6	73.6
Senior Lecturer	1	0.0	1	0.1	100.0
Adjunct Instructor	10	0.4	5	0.3	50.0
Adjunct Assistant Prof	34	1.4	24	1.6	70.6
Adjunct Associate Prof	13	0.5	8	0.5	61.5
Adjunct Prof	3	0.1	1	0.1	33.3
Total for each group	2449		1518		62.0

Additional Demographic Characteristics: Survey Respondents

In addition to the independent variables imported and computed from the ISUHR database, several questions on the Professional Staff Survey (PS Survey) were used to collect more demographic data either not found in the ISUHR database or data that could complement the database. A summary of these four independent variables and comparisons with two of the variables also found in the ISUHR data are presented in this section.

Highest degree. When discussing the variables needed for this study with Human Resources at Iowa State, the variable describing highest degree earned was identified as possibly unreliable by the HR data analyst. This data had not been updated with new degrees outside of ISU unless an employee specifically asked for it to be updated. Because highest degree was hypothesized to be a possible major influence on a whether a professional staff member was involved in teaching, advising, or research, it was important to make sure this variable was correct for analysis. Table A.8 shows the results of the survey question, “What is the highest degree you have completed?” The data show that 51.7% of professional staff

Table A.8
Responses from the Professional Staff Survey:
Q16. What is the highest degree you have completed?

	Response Frequency	Response Percent	Valid Percent
Highest degree			
High School Diploma	52	3.4	3.5
Associate's Degree	58	3.8	3.9
Bachelor's Degree	605	39.9	40.9
Master's Degree	590	38.9	39.9
Doctorate Degree	135	8.9	9.1
Professional Degree (M.D., D.V.M., J.D., etc.)	40	2.6	2.7
Missing	38	2.5	
Total	1518	100.0	100.0

at Iowa State University have a graduate or professional degree – 9.1% with a PhD. Only 7.4% have not completed at least 4 years of college.

Table A.9 shows the data on highest degree from the ISUHR database and the PS Survey compare rather closely. As one would expect, the more current PS Survey data shows some progression from high school diploma into a higher degree category.

Table A.9

Comparison of highest degree data: PS Survey responses and ISUHR data

	PS Survey Response Frequency	PS Survey Response Percent	PS Survey Valid Percent	ISUHR Response Frequency	ISUHR Response Percent	ISUHR Valid Percent
High School Diploma	52	3.4	3.5	92	6.1	6.3
Associate's Degree	58	3.8	3.9	34	2.2	2.3
Bachelor's Degree	605	39.9	40.9	611	40.3	41.8
Master's Degree	590	38.9	39.9	563	37.1	38.5
Doctorate Degree	135	8.9	9.1	146	9.6	10.0
Professional Degree	40	2.6	2.7	16	1.1	1.1
Missing	38	2.5		*56	3.7	
Total	1518	100.0	100.0	1518	100.0	100.0

*certificate (n=2) recoded to missing

Time at Iowa State. This question was asked on the survey as another data check for reliability between the ISUHR database and the PS Survey. The results of the question from the survey “How many years in total have you worked for Iowa State University?” are shown in Table A.10.

Comparison of the ISUHR data to the PS Survey data for years at ISU (Table A.11) show there are some wide variations in some of the categories, especially from 0-1 year. Part of this might be explained by rounding error in a category that is only one year wide when recoding from the ISUHR database since much of the discrepancy lies within category 0-1.

Other categories show much closer alignment.

Table A.10

*Responses from the Professional Staff Survey):**Q17a. How many years in total have you worked for Iowa State University?*

	Response Frequency	Response Percent	Valid Percent
Years at ISU			
0 - 1	128	8.4	8.7
2 - 4	264	17.4	17.9
5 - 9	334	22.0	22.7
10 - 14	226	14.9	15.4
15 - 24	298	19.6	20.3
25 +	221	14.6	15.0
Missing	47	3.1	
Total	1518	100.0	100.0

Table A.11

Comparison of Years at ISU: PS Survey Responses and ISUHR Data

	PS Survey Response Frequency	PS Survey Response Percent	PS Survey Valid Percent	ISUHR Response Frequency	ISUHR Response Percent	ISUHR Valid Percent
0 - 1	128	8.4	8.7	248	16.3	16.3
2 - 4	264	17.4	17.9	282	18.6	18.6
5 - 9	334	22.0	22.7	341	22.5	22.5
10 - 14	226	14.9	15.4	188	12.4	12.4
15 - 24	298	19.6	20.3	265	17.5	17.5
25 +	221	14.6	15.0	194	12.8	12.8
Missing	47	3.1		0	0.0	
Total	1518	100.0	100.0	1518	100.0	100.0

Time in higher education. In addition to asking about length of tenure at Iowa State, a complementary survey question was asked about the length of time a respondent had worked in higher education. The hypothesis for this question was that the longer a professional has spent within higher education, the greater the likelihood of being involved in teaching or research. Table A.12 shows the results of survey question “How many years in total have you worked in higher education?” The results of this question raise an issue of reliability since almost 25% of survey respondents chose not to respond. This high

percentage of nonrespondents results in suspect data for this question. For example, 8.7% of respondents said they had worked 0-1 years at Iowa State but only 6.6% had worked from 0-1 years in higher education. This nonsensical pattern occurs between these two answers through the first three categories of responses and raises questions about its usefulness to this study.

Table A.12

Responses from the Professional Staff Survey:

Q17b. How many years in total have you worked in higher education?

	Response Frequency	Response Percent	Valid Percent
Years in higher education			
0 - 1	76	5.0	6.6
2 - 4	157	10.3	13.7
5 - 9	240	15.8	20.9
10 - 14	192	12.6	16.7
15 - 24	275	18.1	24.0
25 +	208	13.7	18.1
Missing	370	24.4	
Total	1518	100.0	100.0

Marital status. Two additional independent variables, marital status and dependent children, were added to address whether external factors might have bearing on the type of work professional staff are involved in. These questions were replicated exactly from the National Study of Postsecondary Faculty (NSOPF) (U.S. Department of Education, 2004) as standardized questions. The results of the analysis of marital status are shown in Table A.13.

Dependent children. Information was collected from respondents on the number of dependent children in their household. The question was replicated from the 2004 NSOPF survey where a dependent child is a person 24 years old or younger for whom you provide at least half of his/her financial support. The results of the analysis are shown in Table A.14.

Table A.13
Responses from the Professional Staff Survey:
Q18. What is your marital status?

	Response Frequency	Response Percent	Valid Percent
Marital status			
Single and never married	163	10.7	11.1
Married	1158	76.3	78.7
Living with partner or significant other	35	2.3	2.4
Separated, divorced, or widowed	115	7.6	7.8
Missing	47	3.1	
Total	1518	100.0	100.0

Table A.14
Responses from the Professional Staff Survey:
Q19. How many dependent children do you support?

	Response Frequency	Response Percent	Valid Percent
Dependent children			
0	645	42.5	45.0
1	280	18.4	19.5
2	372	24.5	25.9
3	101	6.7	7.0
4	19	1.3	1.3
5	11	0.7	0.8
6 or more	6	0.4	0.4
Missing	84	5.5	
Total	1518	100.0	100.0

Research Characteristics of the Survey Respondents

While the Professional Staff Survey collected additional demographic data as outlined above, the main focus of the survey was to collect information that would directly answer the study's four research questions. The following sections identify the questions asked in the survey and describe how each was coded into variables including some post-processing. In addition, each variable is analyzed and descriptively reported.

“Nature of Work.” The first group of variables, and the data most pertinent to identifying the dependent variable academic professionals within the ranks of the professional staff population, was the “nature of work” carried out by the respondent. The major objective in analyzing the data was to identify those staff members who carried out teaching, research, and academic advising as part of their work duties. These staff members were identified as augmenting the traditional roles of the faculty. Only those responsibilities that were part of official duties were used in order to identify the overlap of faculty responsibilities that supervisors and administrators actually controlled. Information also was collected on outreach and administrative responsibilities and is reported here.

Respondents were asked to identify “the work you do for Iowa State University in teaching, student academic advising, research, outreach or other professional duties” during the current academic year. In addition, respondents were asked to indicate “whether this work is part of your official job duties, if it is outside of your official job duties either with separate pay or as a volunteer, or both.” To see the exact wording and layout of the questions please see the PS Survey as implemented in Appendix D.

Post-processing treatments. Because of a mixture of question complexity, data analysis complexity, and misinterpretation of instruction by respondents, the data from the “Nature of Your Work” section of the survey needed some post-processing. Four different post-processing treatments were used to properly address research questions from the data. Each of these treatments are described below.

“Outside of your official job duties” correction. In the post-collection analysis of the survey with a critical eye toward data consistency, a pattern was discovered in how the “Nature of Your Work” questions were being interpreted and answered by respondents. The

intention for that group of questions was to not only gather what respondent job responsibilities were but also determine if these job responsibilities were being performed as part of “official” duties as an Iowa State employee or whether they were being performed “outside” of official responsibilities. Again, the introduction to the section was worded as:

“Nature of Your Work

Thinking about the current academic year, please select all statements that apply to the work you do for Iowa State University in teaching, student academic advising, research, outreach or other professional duties.

Please indicate in the appropriate column whether this work is part of your official job duties, if it is outside of your official job duties either with separate pay or as a volunteer, or both.”

Although the instructions went through several edits for clarity, the data indicated that without careful reading, the second part of the instructions concerning work “outside of your official” job responsibilities could be misinterpreted. Instead of being interpreted correctly as work that was performed but outside official responsibilities, it is hypothesized that an estimated 10-30% of respondents viewed “outside of your official job duties” as work that was not performed because it was not in the scope of their official job responsibilities. This misinterpreted response hypothesis was identified through a distinct “one or the other” pattern respondents took in answering the questions. If interpreted correctly, answering the “outside of your official job duties” would be answered in addition or without checking the “official” duties box. Interpreted incorrectly, this pattern was a “one box or the other” response, especially when performed over the entire group of questions.

As a part of the post collection analysis of data an attempt was made to make sense of this hypothesized misinterpretation filter the data for analysis. Table A.15 was constructed to show response patterns in the “Nature of Your Work” question. Several temporary “working” variables were created to compute and decipher the pattern. There were 5 sections in this question; teaching, advising, research, outreach, and professional responsibilities – a total of 17 pairs of “part of/outside of” responsibilities. The table shows that 9.4% of respondents (143 of 1518) responded in an entirely “one or the other” fashion to the 17 questions indicating a misinterpretation of the question. The table also shows the total number of respondents who filled out an entire section in “one or the other” pattern.

Based on the pattern analysis and results shown in Table A.15, two filters were used in attempt to eliminate the interpretation problem. The first conservative solution (correction method A) was to eliminate any responses that showed a “one or the other” pattern. This method retained 63% of responses (n=960) and is shown in white in the table. A second, analysis (correction method B) used any respondents with responses showing “one or the other” patterns in either 0 or 1 sections and with 12 or less total question pairs. This method retained 82% of responses (n=1251) and is shown in white and light gray in the table in the heavy box.

An analysis was then performed comparing percentage results using both correction methods A & B. The results of this analysis are shown in Table A.16. Because there was a large difference between the actual data and both proposed correction methods of post processing, the data are reported here but were not used in any other analysis.

Table A.15
Numeric Pattern Recognition for "One or the Other" Misinterpretation in "Nature of Your Work" Section of the PS Survey

		Pairs by Sections crosstabulation						Total
		Sections						
		0	1	2	3	4	5	
Pairs	0	66	0	0	0	0	0	66
	1	106	0	0	0	0	0	106
	2	185	0	0	0	0	0	185
	3	144	8	0	0	0	0	152
	4	136	10	0	0	0	0	146
	5	110	54	1	0	0	0	165
	6	71	50	0	0	0	0	121
	7	68	41	1	0	0	0	110
	8	33	29	9	0	0	0	71
	9	26	31	6	0	0	0	63
	10	9	31	9	2	0	0	51
	11	4	25	9	3	0	0	41
	12	2	12	15	5	0	0	34
	13	0	5	5	2	3	0	15
	14	0	0	5	5	1	0	11
	15	0	0	0	8	4	0	12
	16	0	0	0	0	26	0	26
17	0	0	0	0	0	143	143	
Total		960	296	60	25	34	143	1518

Table A.16
"Outside of Official responsibilities"
Comparison Analysis of Raw Data and Correction Methods A & B

	All Respondents		Correction Method "A"		Correction Method "B"	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
I teach for-credit or R-credit ISU courses	277	18.2	42	4.4	73	5.8
I formally advise ISU students academically	224	14.8	6	0.6	19	1.5
I perform sponsored research	196	12.9	22	2.3	28	2.2
Total respondents*	1518		960		1251	

*responses for these questions not mutually exclusive

“Not directly involved” correction. To make sure each respondent had as much flexibility as possible in selecting job responsibilities within each question of the “Nature of Your Work” section of the survey, the responses were structured to accept all answers that applied. In addition, each job responsibility question within the “Nature of Your Work” section of the survey included as a last option, “I am not directly involved in (teaching, advising, research, outreach, or professional) activities.” This was meant to be the appropriate choice if the respondent had not chosen one of the other responsibilities in the list for either “official job duties” or “outside official job duties.” In most cases this response was chosen correctly – that is, it was selected if no other option in the list was chosen. When this selection did not occur, however, it was relatively simple to catch this error and correct it by creating and computing a new variable and coding it correctly.

A separate analysis was completed for the variables that set the dependent variable academic professional for the study since this was such an important determination. Of the 360 academic professionals, 359 completed the “not directly involved” selection correctly for the variables that determined academic professional status.

Recoding variables for numeric analysis. In addition to correcting coding errors, some recoding was done within the data received from SurveyMonkey™ for it to be analyzed correctly. This was true in the “Nature of Your Work” section because any responses left blank in the survey were coded blank. For numerical analysis of the variables, these blanks were changed to the numeric value “0” (zero).

Computing new variables for analysis. The “Nature of Your Work” section of the survey was by far the most complicated group of questions given to respondents. In order to process these data, some computing of original data was done to derive a final “analysis”

variable. For example, a summative variable for teaching was created to count how many areas of teaching in which each respondent was involved. This same process was also used for research and advising. Using computed variables like these was helpful in finding professional staff who could be classified as academic professionals on several different levels.

Teaching. The descriptive data analysis objectives for the teaching variables within the “Nature of Your Work” section of the survey were to 1) describe how many professionals performed each of the teaching responsibilities as part of their official duties, 2) describe how many professionals performed each of the teaching responsibilities outside of their official duties, and 3) describe how many professionals were directly involved in teaching a for-credit class as part of their job responsibilities, the variable designed to most closely correspond to augmented traditional faculty roles in teaching, and 4) compute new variables showing level of academic responsibility for teaching for each respondent – no teaching, support for teaching, or academic teaching.

Table A.17 shows that 8.7% of professional staff teach a for-credit or R-credit class at ISU as part of their official job duties. This is the definition of an academic professional for

Table A.17

Nature of Your Work: Q1. Teaching, as part of my official job duties

	Response n	Response %
I teach for-credit or R-credit ISU courses	132	8.7
I teach non-credit ISU courses (e.g., short courses, workshops, seminars)	284	18.7
I support teaching (e.g., assisting instructors with materials, equipment, class lists)	291	19.2
Checked at least one option 1-3 (involved in teaching)	537	35.4
Total respondents*	1518	

*responses for these questions not mutually exclusive

the teaching group. A total of 35.4% professional staff chose at least 1 of the 3 teaching options as part of their official duties.

Table A.18 shows the percentages for the three levels of teaching from the variables: has no teaching responsibilities, has support for teaching responsibilities, or augments traditional faculty roles by doing academic teaching.

Table A.18
Level of Teaching, as Part of my Official Job Duties

	Response n	Response %
Teaching – None	981	64.6
Teaching – Support	405	26.7
Teaching – Academic	132	8.7
Total	1518	100.0

Advising. The descriptive data analysis objectives for the advising variables within the “Nature of Your Work” section of the survey were to 1) describe how many professionals performed each of the advising responsibilities as part of their official duties, 2) describe how many professionals performed each of the advising responsibilities outside of their official duties, and 3) describe how many professionals were directly involved in formally advising ISU students academically (as an academic advisor or faculty committee member) as part of their job responsibilities, the variable designed to most closely correspond to augmented traditional faculty roles in advising, and 4) compute new variables showing level of academic responsibility for advising for each respondent – no advising, support for advising, or academic advising.

Table A.19 shows that 6.4% of professional staff responded that they formally advise ISU students academically (as an academic advisor or faculty committee member) as part of their job responsibilities. This is the definition of an academic professional for the advising

group. 32.1% of professional staff chose at least one of the two advising options as part of their official duties.

Table A.19

Nature of Your Work: Q2. Advising, as part of my official job duties

	Response n	Response %
I formally advise ISU students academically (as an academic advisor or faculty committee member)	97	6.4
I advise ISU students through non-academic interactions (e.g., services to students, supervising interns)	442	29.1
Checked at least one option 1-2 (involved in advising)	488	32.1
Total responses*	1518	

*responses for these questions not mutually exclusive

Table A.20 shows the percentages for the three levels of advising from the variables; has no advising responsibilities, has support for advising responsibilities, or augments traditional faculty roles by doing academic advising.

Table A.20

Level of Advising, as Part of my Official Job Duties

	Response n	Response %
Advising - None	1030	67.9
Advising - Support	391	25.8
Advising - Academic	97	6.4
Total	1518	100.0

Research. The descriptive data analysis objectives for the research variables within the “Nature of Your Work” section of the survey were to 1) describe how many professionals performed each of the research responsibilities as part of their official duties, 2) describe how many professionals performed each of the research responsibilities outside of their official duties, and 3) describe how many professionals were directly involved in performing sponsored research (through the Office of Sponsored Programs Administration, OSPA) as

part of their official job responsibilities, the variable designed to most closely correspond to augmented traditional faculty roles in research, and 4) compute new variables showing level of academic responsibility for research for each respondent – no research, support for research, or academic research.

Table A.21 shows that 15.2% of professional staff responded that they perform sponsored research (through the Office of Sponsored Programs Administration, OSPA) as part of their official job duties. This is the definition of an academic professional for the research group. A total of 43.4% professional staff chose at least 1 of the 4 research options as part of their official duties.

Table A.21

Nature of Your Work: Q3. Research, as part of my official job duties

	Response n	Response %
I write research proposals	219	14.4
I perform sponsored research (through the Office of Sponsored Programs Administration, OSPA)	230	15.2
I perform non-sponsored research (research not through OSPA)	243	16.0
I support research (e.g., preparing and maintaining materials and equipment for research)	531	35.0
Checked at least one option 1-4 (involved in research)	659	43.4
Total responses*	1518	

*responses for these questions not mutually exclusive

Table A.22 shows the percentages for the three levels of research from the variables: has no research responsibilities, has support for research responsibilities, or augments traditional faculty responsibilities by doing academic research.

Outreach. The descriptive data analysis objectives for the outreach variables within the “Nature of Your Work” section of the survey were to 1) describe how many professionals performed each of the outreach responsibilities as part of their official duties, and 2) describe

Table A.22
Level of Research, as Part of my Official Job Duties

	Response n	Response %
Research - None	859	56.6
Research - Support	429	28.3
Research - Academic	230	15.2
Total	1518	100.0

how many professionals performed each of the outreach responsibilities outside of their official duties.

Table A.23 shows that 47.0% of professional staff responded that they performed at least one of the three outreach job responsibilities listed.

Table A.23
Nature of Your Work: Q4. Outreach, as part of my official job duties

	Response n	Response %
I am formally involved in Extension and outreach activities (I have an Extension or outreach appointment)	342	22.5
I am involved in outreach activities without a formal Extension or outreach appointment	286	18.8
I support outreach (e.g., preparing materials and equipment for outreach)	481	31.7
Checked at least one option 1-3 (involved in outreach)	714	47.0
Total responses*	1518	

*responses for these questions not mutually exclusive

Administrative responsibilities. The descriptive data analysis objectives for the administrative responsibilities variables within the “Nature of Your Work” section of the survey were to 1) describe how many professionals performed each of the professional responsibilities as part of their official duties, and 2) describe how many professionals performed each of the professional responsibilities outside of their official duties.

Table A.24 shows that 28.9% of professional staff support teaching, 38.3% support research, and 40% support outreach through their official administrative responsibilities. A total of 55.3% staff report they provide general support to their units, and 57.1% feel they provide leadership to their units through their official administrative responsibilities.

Table A.24

Nature of Your Work: Q5. Administrative Responsibilities, as part of my official job duties

	Response n	Response %
I support teaching through administrative responsibilities (e.g., budget, IT, office support)	438	28.9
I support research through administrative responsibilities (e.g., budget, IT, office support)	582	38.3
I support outreach through administrative responsibilities (e.g., budget, IT, office support)	607	40.0
I provide general support to my unit through administrative responsibilities (e.g., budget, IT, office support)	839	55.3
I provide leadership to my unit through administrative responsibilities (e.g., vision, direction, planning)	867	57.1
Total responses*	1518	

*responses for these questions not mutually exclusive

“Your Career.” The second group of variables analyzed from the survey were those focused on the careers of the professional staff respondents. The data are presented here in a descriptive summary format.

Original career intent. In the first question of the “Your Career” section of the survey, respondents were asked “Did you accept your professional position at ISU to become involved in teaching, student academic advising, and/or research?” Table A.25 shows 41.8% professional staff accepted their positions at Iowa State to become involved in at least one of these job responsibilities.

Career relationship to college major. The next question in the “Your Career” section of the survey asked respondents “How close does your professional work at ISU come to

Table A.25

Your Career: Q6. Did you accept your professional position at ISU to become involved in teaching, student academic advising, and/or research?

	Response n	Response %
Yes, I came to ISU to be involved in teaching	233	15.3
Yes, I came to ISU to be involved in student academic advising	123	8.1
Yes, I came to ISU to be involved in research	372	24.5
At least one of the above	634	41.8
Total responses*	1518	100.0

*responses for these questions not mutually exclusive

your college major(s)?" Table A.26 provides the percentages in each response category and shows that 76.3% of respondents indicated that their professional work at Iowa State has a close or direct relationship to their college major.

Table A.26

Your Career: Q7. How close does your professional work at ISU come to your college major(s)?

	Response n	Response %
There is a direct relationship	719	48.7
There is a close relationship	407	27.6
There is a distant relationship	235	15.9
There is no relationship	116	7.9
Total	1477	100.0

Career progression. Question 8 of the PS Survey asked respondents, "Thinking about your career progression at ISU, would you describe it as: a matter of coincidence, a result of deliberate career planning, a combination of coincidence and deliberate career planning, or follows departmental career progression." Table A.27 provides the percentages for each category. 64.7% of respondents were deliberate in their career planning to some degree.

Table A.27

Your Career: Q8. Thinking about your career progression at ISU, would you describe it as:

	Response n	Response %
A matter of coincidence	357	24.3
A result of deliberate career planning	165	11.2
A combination of coincidence and deliberate career planning	786	53.5
Follows departmental career progression	162	11.0
Total	1470	100.0

Past position. Respondents were asked “During your career at Iowa State, have you ever held a position classified as: a merit employee? a tenure track/tenured faculty member?” Data for these two variables were recomputed into a combined variable for analysis. Table A.28 provides the results of the analysis showing that 17.1% of professional staff have been classified as merit staff and 0.9% as tenure/tenure track faculty at some point in their career at Iowa State.

Table A.28

Your Career: Q9. During your career at Iowa State, have you ever held a position classified as a:

	Response n	Response %
merit employee	260	17.1
tenure track/tenured faculty member	13	0.9
both	1	0.1
neither	1244	81.9
Total	1518	100.0

Job satisfaction. A series of questions were asked of survey respondents regarding different aspects of their job satisfaction. These questions were added to mimic the job satisfaction questions in the National Study of Postsecondary Faculty (NSOPF) (U.S. Department of Education, 2004). While some of the satisfaction topics were chosen

specifically for professional staff, others were taken straight from the NSOPF survey, including response categories as a standard.

Table A.29 shows the variables in a descriptive quantitative format. In this analysis: very satisfied=1, somewhat satisfied=2, somewhat dissatisfied=3, and very dissatisfied=4. The results show that job benefits are rated as being most satisfactory with a mean of 1.35 while salary is rated as the most unsatisfactory with a mean of 2.44. Benefits have the least variance while salary has the most.

The data were also analyzed as a categorical variable to coincide with the other categorical variables in the study. The results of this analysis are found in Table A.30 and show similar patterns when compared to the quantitative analysis.

Table A.29

Your Career: Quantifying the Job Satisfaction Variables as Rank Order Numeric

	n	mean	Std. Dev.
The authority you have to make independent decisions	1480	1.61	0.73
Support for professional development	1481	1.87	0.89
Quality of equipment and facilities available to you	1485	1.65	0.74
Your workload	1481	2.05	0.84
Your salary	1478	2.44	0.91
The benefits available to you	1479	1.35	0.58
Your job at Iowa State, overall	1487	1.68	0.66

Ideal job. Respondents of the PS Survey were asked one last question about their careers at Iowa State University to collect information about what responsibilities they would like to have if given the opportunity. Categories for the question “If you could have your ideal job at ISU, it would include:” were teaching, student academic advising, research, outreach, and administration to match the categories in the “Nature of Your Work” section.

Table A.30

Your Career: Q10. With regard to your job at Iowa State, how would you rate your satisfaction in the following areas?

	Response n	Response %
The authority you have to make independent decisions		
very satisfied	751	50.7
somewhat satisfied	582	39.3
somewhat dissatisfied	113	7.6
very dissatisfied	34	2.3
Total	1480	100.0
Support for professional development		
very satisfied	614	41.5
somewhat satisfied	537	36.3
somewhat dissatisfied	243	16.4
very dissatisfied	87	5.9
Total	1481	100.0
Quality of equipment and facilities available to you		
very satisfied	728	49.0
somewhat satisfied	583	39.3
somewhat dissatisfied	143	9.6
very dissatisfied	31	2.1
Total	1485	100.0
Your workload		
very satisfied	414	28.0
somewhat satisfied	663	44.8
somewhat dissatisfied	324	21.9
very dissatisfied	80	5.4
Total	1481	100.0
Your salary		
very satisfied	221	15.0
somewhat satisfied	593	40.1
somewhat dissatisfied	453	30.6
very dissatisfied	211	14.3
Total	1479	100.0
The benefits available to you		
very satisfied	1027	69.4
somewhat satisfied	394	26.6
somewhat dissatisfied	49	3.3
very dissatisfied	9	0.6
Total	1478	100.0
Your job at Iowa State, overall		
very satisfied	622	41.8
somewhat satisfied	730	49.1
somewhat dissatisfied	120	8.1
very dissatisfied	15	1.0
Total	1487	100.0

Administration was the most popular choice followed, in order by outreach, research, teaching, and advising. Full results are shown in Table A.31.

Table A.31

Your Career: Q11. If you could have your ideal job at ISU, it would include:

	Response n	Response %
Teaching	459	30.2
Student Academic Advising	301	19.8
Research	509	33.5
Outreach	635	41.8
Administrative or support services	748	49.3
Total responses*	1518	

*responses for these questions not mutually exclusive

Frequency of faculty interaction. The next group of questions in the survey dealt with the respondent's working relationships with faculty. The first question focused on the amount of time spent working with faculty members. Table A.32 shows that 59.1% work with faculty at least once per week and 35.9% working with faculty at least once per day.

Table A.32

Working with Faculty: Q12. How often do you work with faculty members?

	Response n	Response %
	1518	
I work with faculty at least once per day	532	35.9
I work with faculty at least once per week	366	24.7
I work with faculty at least once per month	227	15.3
I work with faculty less than once per month	239	16.1
I never work with faculty	118	8.0
Total	1482	100.0

Working relationship with faculty. Question 13 of the PS Survey asked "On the whole, how would you describe your working relationship with faculty?" Table A.33 shows

that 35.6% of professional staff respondents indicated that their relationship with faculty was good and 50.1% responding that their relationship was very good.

Table A.33

Working with Faculty: Q13. On the whole, how would you describe your working relationship with faculty?

	Response n	Response %
	1518	
Very good	705	50.1
Good	501	35.6
Average	179	12.7
Poor	18	1.3
Very poor	3	0.2
Total	1406	100.0

Faculty appointment. Question 14 of the survey asked “Do you have a non-tenure-eligible faculty appointment?” Table A.34 shows that 100 professional staff answered that they have an NTE faculty appointment which is interesting in that Table A.7 showed that only 78 professional staff who took the survey had an NTE faculty appointment according to the ISUHR database.

Table A.34

Working with Faculty: Q14. Do you have a non-tenure-eligible faculty appointment?

	Response n	Response %
Yes, I have a non-tenure-eligible faculty appointment.	100	7.0
No, I do not have a non-tenure-eligible faculty appointment.	1326	93.0
Total	1426	100.0

Supervision. Respondents were asked “Please choose those responses that apply to your immediate supervisor.” Data for these two variables, professional staff and faculty, were recomputed into a combined variable for analysis. Table A.35 provides the results of

the analysis showing that 57.2% of professional staff are supervised by other professional staff members and 35.5% are supervised by faculty, while 3.8% have both as supervisors.

Table A.35

Working with Faculty: Q15. Who is your immediate supervisor?

	Response n	Response %
P&S	869	57.2
Faculty	539	35.5
Both	58	3.8
neither	52	3.4
Total	1518	100.0

APPENDIX B

Employment Categories (University of Arizona, 2005)

The University of Arizona employs more than 12,000 people in positions ranging from Dean to accountant, from secretary to professor. Employees are designated as either Classified Staff or Appointed Personnel that includes a number of employment categories and designations that determine the conditions of employment for each position.

Classified Staff Employees

Classified Staff employees include any employee whose position is classified under the Arizona Universities Personnel System. Classified Staff titles, pay grade and classification information can be accessed on the Human Resources web page at http://www.hr.arizona.edu/04_cb/comp/tools.php. Prior to completing an initial six-month probation period, Regular Classified Staff employees are considered "at will employees" whose employment may be terminated at any time for any reason that does not violate public law.

Appointed Personnel Employees

Appointed Personnel employees of the University include faculty members, administrators and academic and service professionals who are appointed to serve in the areas of teaching, research and administrative services. Each year, after the University's budget has been approved, the institution distributes notices of appointment to new employees and notices of reappointment to appointed personnel whose contracts are being renewed.

Administrators

Includes the President of the University and the employees who report to the President who are responsible for planning, organizing, directing, controlling and evaluating the activities of a major segment of the University. Administrative titles include President, Provost, Vice President, Dean, Department Head and Director. Administrative appointments are year-to-year, and administrators are subject to Arizona Board of Regents (ABOR) policies, Chapter 6-101.

Faculty Members

Includes members of the University who are appointed to positions that are responsible for and whose performance evaluations are primarily based on teaching, research and public service goals and objectives of the University. Faculty titles include Professor, Associate Professor, Assistant Professor, Instructor and Lecturer. Faculty appointments may be tenure-eligible, tenured or non-tenure eligible and are subject to Arizona Board of Regents (ABOR) policy, Chapter 6-201.

Academic Professionals

Includes non-classified employees involved with research or teaching programs who require professional and intellectual freedom, including librarians, cooperative extensionists, scientists, and researchers. Appointments may be continuing eligible, continuing or year-to-year and are subject to Arizona Board of Regents (ABOR) policy, Chapter 6-301.

Service Professionals

Includes non-classified staff employees with a direct role in service who require professional and intellectual freedom, including those in student services, technical services, campus health services, athletics and public services. Service professional titles include

Director, Editor and Coordinator. Appointments may be continuing eligible, continuing or year-to-year and are subject to Arizona Board of Regents (ABOR) policy, Chapter 6-301.

Non-Tenure-Eligible Faculty

Includes those members of the faculty who are not eligible for tenure, i.e. those having designations such as "adjunct", "visiting," "clinical," or "research" as part of their titles; lecturers, initially appointed as such; instructors who are candidates for a degree; and non-tenured individuals who hold part-time faculty appointments.

Employment Categories (Iowa State University, 2007)

Faculty Tenure Track:

Tenure and tenure-eligible appointments are regularly budgeted positions at any academic rank. Tenure-eligible faculty are appointed for a period of time specified at the time of initial appointment and are considered to be in a probationary period of service leading to tenure.

Faculty Term:

Non-tenure-eligible faculty positions are term appointments eligible for renewal based upon the quality of performance and the continuing need of the unit.

Faculty Adjunct:

Adjunct appointments are limited renewable term full or part time appointments and are neither tenured nor tenure-track.

Professional & Scientific Continuous:

Research, managerial, administrative, specialized technical and other professional service positions that are expected to exist for an indefinite period and the university is committed to employing the person in that position on a continuous basis, subject to conditions of performance and stated dismissal rules or layoff.

Professional & Scientific Term:

Research, managerial, administrative, specialized technical and other professional service positions that are not expected to exist beyond a specified date or subject to renewal of funding; project completion date and continuous funding cannot be anticipated.

Merit Permanent:

Support positions in areas such as clerical, skilled trades, public safety, service and technical support. These are regularly scheduled and recurring appointments, paid on an hourly basis.

Merit Temporary:

Support positions in areas such as clerical, skilled trades, public safety, service and technical support to provide for services needed on a periodic basis. Temporary employees may not work more than 780 hours in any or all departments in a fiscal year. Appointment to a temporary position will not confer rights to a permanent position. Temporary positions will not receive university benefits unless one meets the IPERS eligibility requirements by working in two consecutive quarters with earnings at least \$300 in each quarter.

Contract:

Appointments in which the conditions of employment are governed by a contract.

Post Doctoral:

A trainee position for post doctoral candidates.

Affiliate:

These are not ISU employees. Type of appointment may be defined in the job description.

APPENDIX C

Survey Invitation (by email)

Dear [FirstName],

I am writing to invite your participation in a research study of professional staff at Iowa State University. This study is an effort to characterize the unique roles, responsibilities, and credentials of professional employees at the university and the many ways they collaborate with students, faculty, and administration.

Because of the variety of job responsibilities professional staff hold at Iowa State, every Professional and Scientific staff member is being invited to participate. However, your participation is completely voluntary and confidential. The web-based survey averages about 5 minutes to complete. To become part of the study, please access this link [SurveyLink]. You can then follow the directions to accept participation and respond.

This research is part of a doctoral study looking at the role professional staff play at public research universities. In the past forty years, professional staff have taken on more and more responsibilities in order to satisfy the university's growing demand for teaching, research, student advising, outreach, and administration. However, there has been minimal study done on this group of employees. With your help this research study will begin to collect more detailed information on professional staff and their responsibilities at the university.

You should be assured that your participation and your answers to the survey are completely confidential. I will be the only one handling the raw data. The data will be stripped of unique identification (email address) after collection. This research study and survey have been approved by the Iowa State Human Subjects Research Office. A copy of the approved study proposal can be found at http://kkane.public.iastate.edu/ISU_HSRO_KK.pdf.

If you do not wish to participate in this survey, you may click the link below and be automatically removed from the study. Please consider participating, however, as information about our responsibilities as professional employees are not well documented and research such as this will be very important to better understand our role in the university.

[RemoveLink]

If you have any questions or comments about this research, I would be happy to talk with you. You can contact me by telephone at 294-0526 or by email at kkane@iastate.edu. Thank you very much for participating.

Sincerely,

Kevin Kane
PhD Candidate in Higher Education
& principal investigator for this study
Director, ISU GIS Facility

Actual invitation email:

Dear Robert,

I am writing to invite your participation in a research study of professional staff at Iowa State University. This study is an effort to characterize the unique roles, responsibilities, and credentials of professional employees at the university and the many ways they collaborate with students, faculty, and administration.

Because of the variety of job responsibilities professional staff hold at Iowa State, every Professional and Scientific staff member is being invited to participate. However, your participation is completely voluntary and confidential. The web-based survey averages about 5 minutes to complete. To become part of the study, please access this link <http://www.surveymonkey.com/s.asp?A=256180766E7497>. You can then follow the directions to accept participation and respond.

This research is part of a doctoral study looking at the role professional staff play at public research universities. In the past forty years, professional staff have taken on more and more responsibilities in order to satisfy the university's growing demand for teaching, research, student advising, outreach, and administration. However, there has been minimal study done on this group of employees. With your help this research study will begin to collect more detailed information on professional staff and their responsibilities at the university.

You should be assured that your participation and your answers to the survey are completely confidential. I will be the only one handling the raw data. The data will be stripped of unique identification (email address) after collection. This research study and survey have been approved by the Iowa State Human Subjects Research Office. A copy of the approved study proposal can be found at http://kkane.public.iastate.edu/ISU_HSRO_KK.pdf.

If you do not wish to participate in this survey, you may click the link below and be automatically removed from the study. Please consider participating, however, as information about our responsibilities as professional employees are not well documented and research such as this will be very important to better understand our role in the university.
<http://www.surveymonkey.com/r.asp?A=256180766E7497>

If you have any questions or comments about this research, I would be happy to talk with you. You can contact me by telephone at 294-0526 or by email at kkane@iastate.edu. Thank you very much for participating.

Sincerely,

Kevin Kane
PhD Candidate in Higher Education
& principal investigator for this study
Director, ISU GIS Facility

Survey Follow-up Contact #1 (by email)

Hi [FirstName],

Earlier this week I sent you an invitation to participate in a study of professional staff here at ISU. This note is a reminder that its not too late for you to take part in this important study. This short survey takes about 5 minutes to complete and can be found quickly by accessing this link, [SurveyLink]. I've copied my original invitation email below if you'd like to review the details about this research including an option to be taken off the participant list.

Thank you for your consideration to participate,
Kevin Kane

<Attached original invitation email text here.>

Survey Follow-up Contact #2 (by email)

Hi [FirstName],

Last week I sent you an invitation and a reminder to participate in a study of professional staff here at ISU. This note is a second reminder that its still not too late for you to take part in this important study. The short survey takes about 5 minutes to complete and can be found quickly by accessing this link, [SurveyLink]. I've copied my original invitation email below if you'd like to review the details about this research.

If you wish to decline participation and be taken off the survey reminder list please click on this link:

[RemoveLink]

Thanks again for your consideration to participate,
Kevin Kane

<Attached original invitation email text here.>

Survey Follow-up Contact #3 (by email)

Good morning [FirstName],

Two weeks ago I sent you an invitation to participate in a study of professional staff here at ISU. This note is a final reminder that you can still take part in this important study until 5pm, Wednesday, November 22nd. The short survey takes about 5 minutes to complete and can be found quickly by accessing this link, [SurveyLink]. I've copied my original invitation email below if you'd like to review the details about this research.

If you wish to decline participation in the survey please click on this link:
[RemoveLink]

Thanks again for your consideration to participate,
Kevin Kane

<Attached original invitation email text here.>

APPENDIX D

Survey Instrument

Professional Staff Survey

[Exit this survey >>](#)

Survey of Professional Staff at Iowa State University

Welcome!

Thank you for choosing to participate in this survey to characterize the unique roles, responsibilities, and credentials of professional employees at Iowa State University and the many ways they collaborate with students, faculty, and administration.

Please be assured that your participation in this study and your answers to the survey are completely confidential. The survey is voluntary and you may choose to skip any questions you do not feel comfortable answering. No one except the principal investigator will have access to the raw data. Once collected, the raw data will be stripped of identification (email address) before analysis. The methodology for this research study has been approved by the Iowa State University Human Subjects Research Office. A copy of the approved form can be found [here](#).

The survey averages about 5 minutes to complete.

If you have any questions or comments about this study, I would be happy to talk with you. You can contact me by telephone at 294-0526 or by email at kkane@iastate.edu

Again, thank you for your participation in this important study.

Kevin Kane,
PhD Candidate in Higher Education
& Principal Investigator for this study
Director, ISU GIS Facility

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Nature of Your Work

Thinking about the current academic year, please select all statements that apply to the work you do for Iowa State University in teaching, student academic advising, research, outreach or other professional duties.

Please indicate in the appropriate column whether this work is part of your official job duties, if it is outside of your official job duties either with separate pay or as a volunteer, or both.

1. Teaching

(please choose all responses that apply)

	as part of my official job duties	outside of my official job duties
I teach for-credit or R-credit ISU courses	<input type="checkbox"/>	<input type="checkbox"/>
I teach non-credit ISU courses (e.g., short courses, workshops, seminars)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
I support teaching (e.g., assisting instructors with materials, equipment, class lists)	<input type="checkbox"/>	<input type="checkbox"/>
I am not directly involved in teaching activities	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

2. Student Academic Advising

(please choose all responses that apply)

	as part of my official job duties	outside of my official job duties
I formally advise ISU students academically (as an academic advisor or faculty committee member)	<input type="checkbox"/>	<input type="checkbox"/>
I advise ISU students through non-academic interactions (e.g., services to students, supervising interns)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
I am not directly involved in any type of student advising activities	<input type="checkbox"/>	<input type="checkbox"/>

3. Research

(please choose all responses that apply)

	as part of my official job duties	outside of my official job duties
I write research proposals	<input type="checkbox"/>	<input type="checkbox"/>
I perform sponsored research (through the Office of Sponsored Programs Administration, OSPA)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
I perform non-sponsored research (research not through OSPA)	<input type="checkbox"/>	<input type="checkbox"/>
I support research (e.g., preparing and maintaining materials and equipment for research)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
I am not directly involved in research activities	<input type="checkbox"/>	<input type="checkbox"/>

4. Outreach

(please choose all responses that apply)

	as part of my official job duties	outside of my official job duties
I am formally involved in Extension and outreach activities (I have an Extension or outreach appointment)	<input type="checkbox"/>	<input type="checkbox"/>
I am involved in outreach activities without a formal Extension or outreach appointment	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
I support outreach (e.g., preparing materials and equipment for outreach)	<input type="checkbox"/>	<input type="checkbox"/>
I am not directly involved in outreach activities	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

5. Professional Responsibilities

(please choose all responses that apply)

	as part of my official job duties	outside of my official job duties
I support teaching through administrative responsibilities (e.g., budget, IT, office support)	<input type="checkbox"/>	<input type="checkbox"/>
I support research through administrative responsibilities (e.g., budget, IT, office support)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
I support outreach through administrative responsibilities (e.g., budget, IT, office support)	<input type="checkbox"/>	<input type="checkbox"/>
I provide general support to my unit through administrative responsibilities (e.g., budget, IT, office support)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
I provide leadership to my unit through administrative responsibilities (e.g., vision, direction, planning)	<input type="checkbox"/>	<input type="checkbox"/>

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Your Career**6. Did you accept your professional position at ISU to become involved in teaching, student academic advising, and/or research?***(please choose all responses that apply)*

- Yes, I came to ISU to be involved in teaching
- Yes, I came to ISU to be involved in student academic advising
- Yes, I came to ISU to be involved in research
- No, I did not come to ISU to be involved in teaching, student academic advising, or research

7. How close does your professional work at ISU come to your college major(s)?*(please choose the one response that best applies)*

- There is a direct relationship
- There is a close relationship
- There is a distant relationship
- There is no relationship

8. Thinking about your career progression at ISU, would you describe it as:*(please choose the one response that best applies)*

- A matter of coincidence
- A result of deliberate career planning
- A combination of coincidence and deliberate career planning
- Follows departmental career progression

9. During your career at Iowa State, have you ever held a position classified as:*(please choose all responses that apply)*

- a merit employee?
- a tenure track/tenured faculty member?

10. With regard to your job at Iowa State, how would you rate your satisfaction in the following areas?

(please choose the one response that best applies to each statement)

	very satisfied	somewhat satisfied	somewhat dissatisfied	very dissatisfied
The authority you have to make independent decisions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Support for professional development	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Quality of equipment and facilities available to you	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Your workload	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Your salary	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The benefits available to you	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Your job at Iowa State, overall	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. If you could have your ideal job at ISU, it would include:

(please choose all responses that apply)

- Teaching
- Student Academic Advising
- Research
- Outreach
- Administrative or support services

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Working with Faculty**12. How often do you work with faculty members?**

(please choose the one response that best applies)

- I work with faculty at least once per day
- I work with faculty at least once per week
- I work with faculty at least once per month
- I work with faculty less than once per month
- I never work with faculty

13. On the whole, how would you describe your working relationship with faculty?

(please choose the one response that best applies)

- Very good
- Good
- Average
- Poor
- Very poor

14. Do you have a non-tenure-eligible faculty appointment?

(please choose the one response that best applies)

- Yes, I have a non-tenure-eligible faculty appointment.
- No, I do not have a non-tenure-eligible faculty appointment.

15. Please choose those responses that apply to your immediate supervisor.

(please choose all responses that apply)

- I am supervised by a professional staff member
- I am supervised by a faculty member (includes deans, department chairs, and administrators with faculty appointment)

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Background Information**16. What is the highest degree you have completed?**

- High School Diploma
- Associate's Degree
- Bachelor's Degree
- Master's Degree
- Doctorate Degree
- Professional Degree (M.D., D.V.M., J.D., etc.)

17. How many years in total have you worked:

	0 - 1	2 - 4	5 - 9	10 - 14	15 - 24	25 +
for Iowa State University?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
in higher education?	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>

18. What is your marital status?

- Single and never married
- Married
- Living with partner or significant other
- Separated, divorced, or widowed

19. How many dependent children do you support?

(for this study, a dependent child is a person 24 years old or younger for whom you provide at least half of his/her financial support.)

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Professional Staff Survey[Exit this survey >>](#)**Thank You!**

Thank You for your participation in this survey of professional staff at Iowa State University. Please remind others in your work area to participate if they have not already done so.

Upon completion of this study, analysis and results will be available in the ISU Library and through the ISU Professional and Scientific Council's website.

Thanks again for your participation,
Kevin Kane

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APPENDIX E

Survey Version History

Version 0

12/10/05

This is the first version presented in the draft research proposal. It is the version of the survey that was included in the Research Proposal class (ELPS 615H) for Dr. Hamrick [12/12/05] and also the updated, first draft to Dr. Schuh [4/6/06]. Questions were formulated based on the four research questions in the proposal. This first survey used SurveyMonkey as the survey tool. Because it was a free subscription and limited to 10 questions, the survey was actually pieced together in two sections. There was a small pre-test done that included three responses -- more to test how the tool worked rather than the questions in the survey.

Version 1

7/24/06

This is the version that was presented in the second draft of the proposal to Dr. Schuh. Steve Porter and Mimi Benjamin. In this version the survey tool was switched to AccessPlus. This version was also given to the P&S Exec committee for their input.

This was the version given to IRB for 1st approval.

Changes from version 0:

- Changed from SurveyMonkey to AccessPlus thinking that AccessPlus might allow more security and better connection to the ISUHR database.
- Updated survey introduction
- Much more serious analysis of how the research questions in the proposal were turned into survey questions. Much of the survey is updated.
- Many of the demographic questions are removed since the ISUHR database will be merged with the survey data and will contain this information.
- Survey invitation is updated.

Version 2

9/13/06.

Changes from version 1 to 2 were primarily from input from Steve Porter and Dan Woodin.

Survey tool still AccessPlus.

- Added my P&S title to survey intro.
- Thinking only about current academic year in answering questions
- Added examples of teaching activities to make more understandable

- What does “indirectly” mean? Eliminated “directly/indirectly” wording
- Changed terms from advising to academic advising
- Added advising examples
- Added research examples
- Better explanation of Extension
- Changes in explaining professional support
- Changed term “luck” to “coincidence”
- Concern over some measurement error – need to pretest
- Do I need the work area in questions – can it come from merged database?
- Eliminated “being in right place at right time” and added “follows departmental career progression”
- Redesigned faculty interaction question
- Consider a different survey tool:
 - Concern about not having a direct link from email to survey
 - AccessPlus limitations on question field lengths
 - Cost

Version 3

9/14/06

Survey tool concerns – change to SurveyMonkey. 1 month advance subscription purchased.

Changes from version 2 to 3:

- Slight changes in survey intro.
- Questions renumbered
- Split the faculty interaction question
- Mostly conversion from AccessPlus to Survey Monkey.

This version was pretested by the P&S Council from 9/15 to 9/22. The survey was delivered through SurveyMonkey. The email list (survey frame) was populated from a P&S Council database with first and last name as well. The invitation was delivered through SurveyMonkey to each individual through an individual link. I also added an introductory paragraph stating that this was a pretest and that any written feedback would be appreciated. Surveys were completed -- 9/15, 20 – 9/18, 4 – 9/19, 0 – 9/20, 1

After the first 20 respondents returned feedback, some slight changes were made in the wording of some questions while the survey was being administered (on retrospect, I should have waited). [version 3.5?]

The follow-up email was sent 9/21 reminding non-respondents they had until 9/22 at 5pm to respond. As a result there were 9 more surveys returned: 9/21—7; 9/22—1; 9/23—1.

All totaled, 34 of 37 in the survey frame of the pretest responded for a return rate of 92%. In addition, 17 of 34 responded by email with written feedback and an additional 6 sent notes that they had no problems with the survey.

Results from this survey were exported from SurveyMonkey, imported to Excel, and then imported to SPSS. The file was then tested to make sure it could be merged to the ISUHR database (Summer 05 version) in SPSS format. The test was completely successful. This allowed me to meet with the Provost's Office and HR to present my methodology and ask for the ISUHR database as of 10/1/06. This database will also be used for the survey frame for the final delivery of the questionnaire.

Version 4

9/18/06

Changes from version 3 to 4 were taken from feedback from (at the time) 15 of the 20 first day respondents from version 3. Lots of little tweaks (some bigger tweaks) were included from the feedback I received. This is the version of the survey that was sent to the POS Committee in the research proposal for the research proposal meeting on 10/4/06.

This version was then given as pretest 2 to those who gave written feedback using the same methodology as pretest 1 on 9/21. I again asked for written feedback. I received 12 of 16. Most of the feedback from this pretest has been that respondents concerns have been addressed. I have had a few more suggestions and am adding those changes to version 5.

Version 5

10/3/06

Changes from version 4 from pretest feedback.

- Added "and you may choose to skip any questions you do not feel comfortable answering" to survey introduction. Required from IRB audit.
- Changed "Length of Service" group to "Background Information" and added a page break (Making a 4-page survey).
- Added highest level of education question. Some skepticism by IR that P&S education level variable is up to date. Wording of this question from the 1999 P&S survey (ISU Stat Lab).
- Added gender question to background information (HR won't release this data).
- Removed instructions (blue) from background information questions.
- Added another response, "at least monthly" for faculty interaction question.
- Changed "work at Iowa State" to "work for Iowa State"
- Added phrase "in total" to years at ISU and in Higher Ed.
- Added phrase "or outreach" to formal Extension question
- Deleted references to "and NTE Faculty"
- Confidentiality wording in the invitation email changed.

- Added “administration” to list of important professional duties in email invitation.

Sent to POS Committee and Brenda Behling (Provost’s Office) and Vicki Brubaker (HR) on 10/3/2006 right before dissertation proposal meeting on 10/4.

Version 6

10/8/06

First update after proposal meeting on 10/4/06.

This version included 3 proposed methods of solving the “job responsibilities” section where the POS committee recommended both “official” and “unofficial” responsibilities

- 1a – As is but with new directions
 - Thinking about the current academic year, please select all statements that apply to the work you do in teaching, student academic advising, research, outreach or other professional duties.
 - This work may be part of your official job duties (in your PIQ) or outside of your official job duties either with separate pay or as a volunteer.
- 1b
 - as part of my official job duties (in my PIQ)
 - outside of my official job duties (not in my PIQ)
- 1c
 - as part of my official job duties (in my PIQ)
 - outside of my official job duties with separate pay
 - outside of my official job duties as a volunteer

These choices were presented to Steve Porter and Mimi Benjamin. It was agreed that 1b was best.

Version 7

10/10/07

This is the version (7b) given to IRB on for modification approval that was granted on 10/31.

Incorporated 1b from version 6 with new instructions from 1a.

After discussion with Steve Porter:

- Added satisfaction question. “With regard to your job at Iowa State, how would you rate your satisfaction in the following areas?”
- Added satisfaction with working with faculty. “On the whole, would you describe your working relationship with faculty as:”
- Reformatted years at ISU and years in higher ed to be horizontal

After discussion with Steve Porter added the following demographics to mimic NSOF faculty survey – used NSOF as guide.

- Added gender
- Added race
- Added marital status
- Added support of dependent children
- I was concerned on how these more personal questions might affect response rate of survey so I added this explanation of demographic section:
 - These demographic questions are important to help identify patterns between job responsibilities and backgrounds of professional staff at Iowa State. Again, please be assured that answers to these questions are strictly confidential and will be anonymous in the data analysis.

Version 7b

This is the version given to IRB on for modification approval that was given on 10/31. Title says (v7).

HR gave permission to get gender and race from ISUHR data on 10/13 so:

- Eliminated race question
- Eliminated gender question
- Eliminated demographic question caveat on advice from SP that it may draw more attention than explain.

Version 8

10/18/07

This is version 7b renamed to 8 to keep things straight.
Pretested with n=15

Version 9

10/20/07

Based on v8 pretest feedback (see Word doc for all suggestions):

Added “students” to collaboration piece in introduction.

Changes to invitation email.

Changed (please choose all responses that apply) instructions to larger size.

Changed instructions for Nature of Work to clarify:

- Thinking about the current academic year, please select all statements that apply to the work you do for Iowa State University in teaching, student academic advising, research, outreach or other professional duties. Please indicate in the appropriate column whether this work is part of your official job duties, or if it is outside of your official job duties either with separate pay or as a volunteer, or both.

- Added under 5. Professional Responsibilities a new choice:
 - I provide leadership to my unit through administrative responsibilities (e.g., vision, direction, planning)
- Added a new question:
 - During your career at Iowa State, have you ever held a position classified as: (please choose all responses that apply)
 - a merit employee?
 - a tenure track/tenured faculty member?

This is the implemented version. N=1518 of 2449 email invitations.

APPENDIX F

VARIABLES AND DESCRIPTIONS

ISUHR Database: Variables and descriptions

Identification

- ~[ID] (unique identification number from 1-2449) – directly from database
- ~[LAST_NAME] (last name)– directly from database
- ~[FIRST_NAME] – directly from database
- ~^[EMAIL] (email address) - **directly from database – used as merger field, then deleted**

Demographics

- ^[GENDER] (gender) – **directly from database**
 - Female
 - Male
- ^[RACE] (race) – **directly from database**
 - African-American and Black, not of Hispanic Origin
 - American Indian or Alaskan Native
 - Asian or Pacific Islander
 - Latino or Hispanic
 - White, not of Hispanic Origin
- *[RACE_CODE] (shortened code for race) –recoded from [RACE]
- [BIRTH_YEAR] (year of birth) – directly from database
- *[AGE] (2006 – year of birth) – computed from [BIRTH_YEAR]
- *^[AGE_CODE] (5 age groupings of approximately equal frequencies) – **recoded from [AGE]**
 - 22-33 (years)
 - 34-41
 - 42-48
 - 49-54
 - 55-75

Classification titles

- [TITLE_CODE] (HR code number for title) – directly from database
- [TITLE] (name of title) – directly from database

*^[TITLE_FAMILY] (researcher subjective aggregate of titles) – recoded from [TITLE]

- Accountant
- Admin Spec
- Administrator
- Advisor
- Analyst
- Architect
- Associate
- Coordinator
- Cty Ext Ed Dir
- Designer
- Director
- Engineer
- Health Professional
- Health Spec
- Manager
- Officer
- Program Asst
- Program Coord
- Res Assoc
- Scientist
- Specialist
- Supervisor

Classification and Salary

^[PAY_GRADE] (P&S classification grade) – directly from database

- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20

[GRADE_MIN] (minimum pay grade salary) – directly from database

[GRADE_MAX] (maximum pay grade salary) – directly from database

[SALARY] (annual salary) – directly from database

*^[SALARY_CODE] (code field of 5 approx. equal frequencies) – computed from [SALARY]

- 0-37 (thousand)
- 37-44
- 44-51
- 51-63
- 63-183

*[GRADE_DEPTH] (Percentage of in-range grade) computed from [SALARY], [GRADE_MIN] and [GRADE_MAX]

*^[GRADE_DEPTH_CODE] (5 categories of equal bands) - recode of [GRADE_DEPTH]

- missing
- 0-20
- 21-40
- 41-60
- 61-80
- 81-100
- 100 and over

Appointment

[APPOINTMENT] (percentage of full time) – directly from database

[PAY_BASE] (number of months in contract) – directly from database

[FRACTION] (percentage of FTE - [APPOINTMENT]*[PAY_BASE]) – directly from database

[HIRE_DATE] (date of hire) – directly from database

[TERM_DATE] (date of contract termination) – directly from database

*^[TERM_EMPLOYEE] (code for terminal employee) – recode from [TERM_DATE]

- Yes
- No

APPT_FTE – Full time equivalent of appointment

PAY_BASE – Appointment type (code)

*PAY_BASE# - Appointment fraction of year

*^PAY_FRAC# - APPT_FTE * PAY_BASE#

Service to Iowa State

*[YRS_AT_ISU] (years of service at ISU) – computed from [HIRE_DATE]

*^[YRS_AT_ISU_CODE2] recoded from [YRS_AT_ISU] to reflect same categories as PS Survey

- | | |
|-----------|----|
| - 0 - 1 | 1 |
| - 2 - 4 | 2 |
| - 5 - 9 | 3 |
| - 10 - 14 | 4 |
| - 15 - 24 | 5 |
| - 25 + | 6 |
| - Missing | NA |

[SENIORITY_DATE] (seniority date at ISU) – directly from database

[CLASS_DATE] (date of last classification at ISU) – directly from database

Work Area

[DIRECTORY_DEPT_#] (department code from ISU directory) – directly from database

[DIRECTORY_DEPT] (department name from ISU directory) –directly from database

*[AREA_NAME_CODE] (first 2 digits of department number) - recode of

[DIRECTORY_DEPT_#]

***^[AREA_NAME] (researcher assigned name of major area) recode of
*[AREA_NAME_CODE]**

- AGEXP Ag Experiment Station
- AL/IPRT Ames Lab/IPRT
- CES Coop Extension Service
- CIRAS Ctr for Ind Res and Service
- CoAG College of Agriculture
- CoBUS College of Business
- CoDES College of Design
- CoENG College of Engineering
- CoHSci College of Human Sciences
- CoLAS College of Lib Arts & Sci
- CoVMed College of Vet Medicine
- FPM Facilities Planning & Man
- ITS Info Tech Service
- LIB Library
- PRES President's Office
- PROV Provost's Office
- PSI Plant Sciences Institute
- VPBF VP Business & Finance
- VPRes VP Research
- VPSA VP Student Affairs

Funding

[FUND_ACCT] (primary funding account) – directly from database

***^[FUND_FAMILY] (5 major funding families) – recode from [FUND_ACCT]**

- missing
- 100 Special Program Approp
- 200 Self Supporting
- 400 Contracts
- 600 Federal Approps
- 700 General Univ, Funds

[FUND_ ACCT _DEPT_#] (department code of major funding code) – directly from database

[FUND_ ACCT _DEPT] (department of major funding code) – directly from database

Academic Credentials

[HIGH_DEGREE_EARNED] (highest degree earned) – directly from database

***^[DEGREE_CODE] (code for highest degree) – recoded from
[HIGH_DEGREE_EARNED]**

- missing
- High School
- Certificate
- Associates
- Bachelors
- Masters
- Professional
- Doctorate

*[^][DEGREE_YRS] (code for years in school) – recoded from [DEGREE_CODE]

- missing
- 0
- 1
- 2
- 4
- 6
- 7
- 8

[YEAR_DEGREE_EARNED] (year highest degree was earned) – directly from database

Faculty Status (rank, term, department and length of service)

[^][FACULTY_RANK] (faculty ranking) – directly from database

- No Faculty Rank
- TEMP INSTRUCTOR
- LECTURER
- SENIOR LECTURER
- ADJ INSTRUCTOR
- ADJ ASST PROF
- ADJ ASSOC PROF
- ADJ PROF

*[^][FAULTY_APPT] (faculty appointment) – recoded from [FACULTY_RANK]

- Y
- N

[FCLTY_START_DATE] (date of faculty appointment) – directly from database

[FCLTY_RANK_DATE] (date of last faculty rank) – directly from database

[FCLTY_END_DATE] (date when faculty rank ends) – directly from database

*[FACULTY_APPT_#] (number of college with faculty appointment) – computed from 1,2, & 3

[FCLTY_DEPT_CD1] (college of primary faculty appointment) – directly from database

[FCLTY_DEPT_NAME1] (department of primary faculty appointment) – directly from database

[FCLTY_DEPT_CD2] (college of primary faculty appointment) – directly from database

[FCLTY_DEPT_NAME2] (department of primary faculty appointment) – directly from database

[FCLTY_DEPT_CD3] (college of primary faculty appointment) – directly from database

[FCLTY_DEPT_NAME3] (department of primary faculty appointment) – directly from database

* computed or recoded from an original ISUHR data variable

[^] variables and terms in final analysis

~ system variables eliminated before analysis

Web Survey Database: Variables and descriptions

SurveyMonkey System Variables

- ~[RespondentID] (ID assigned by SurveyMonkey)
- ~[StartDate] (Date and time survey was initiated)
- ~[EndDate] (Date and time survey was completed)
- *~[Time] (Time from [StartDate] to [EndDate]) - Hours, minutes and seconds from survey start to end
- ~[IP_Address] (The IP address used by respondent)
- ~[Email_SM] (Email used by SurveyMonkey from HR frame) – used to match ISUHR database
- [Status] (Response Status) - from SurveyMonkey response database - not in questionnaire data
 - No Response
 - Declined
 - Responded
- [response] a completed survey
 - Y
 - N

Nature of Work

- [t1a] I teach for-credit or R-credit ISU courses - as part of my official job duties
 - 1 = checked (yes)
 - 0 = did not check (no) [changed from blank to be additive]
- [t1b] I teach for-credit or R-credit ISU courses - outside of my official job duties
 - 2 = checked (yes)
 - 0 = did not check (no) [changed from blank to be additive]
- *[t1c] I teach for-credit or R-credit ISU courses (computed from [T1a]+[T1b])
 - 0 Neither
 - 1 Official job duties
 - 2 Outside official job duties
 - 3 Both
- [t2a] I teach non-credit ISU courses (e.g., short courses, workshops, seminars) - as part of my official job duties
 - 1 = checked (yes)
 - blank = did not check (no)
- [t2b] I teach non-credit ISU courses (e.g., short courses, workshops, seminars) - outside of my official job duties
 - 2 = checked (yes)
 - blank = did not check (no)
- [t3a] I support teaching (e.g., assisting instructors with materials, equipment, class lists) - as part of my official job duties
 - 1 = checked (yes)
 - blank = did not check (no)

[t3b] I support teaching (e.g., assisting instructors with materials, equipment, class lists) - outside of my official job duties

2 = checked (yes)
blank = did not check (no)

[tXa] I am not directly involved in teaching activities - as part of my official job duties

1 = checked (yes)
blank = did not check (no)

*[ntXa] I am not directly involved in teaching activities - as part of my official job duties (recoded [aXa] if analysis showed data entry problem)

1 = checked none of options 1-3 (not involved in teaching)
0 = checked at least one option 1-3 (involved in teaching)

*[teaching] Computed variable that adds all “teaching –part of my official duties” together and gives higher weight to [t1a]. $=(t1a * 10) + [t2a] + [t3a]$

*[teaching_11] Recodes [teaching] to no teaching, support for teaching, or academic teaching.

[a1a] I formally advise ISU students academically (as an academic advisor or faculty committee member) - as part of my official job duties

1 = checked (yes)
0 = did not check (no) [changed from blank to be additive]

[a1b] I formally advise ISU students academically (as an academic advisor or faculty committee member) - outside of my official job duties

2 = checked (yes)
blank = did not check (no)

*[a1c] I formally advise ISU students academically (as an academic advisor or faculty committee member) (computed from [A1a]+[A1b])

0 Neither
1 Official job duties
2 Outside official job duties
3 Both

[a2a] I advise ISU students through non-academic interactions (e.g., services to students, supervising interns) - as part of my official job duties

1 = checked (yes)
blank = did not check (no)

[a2b] I advise ISU students through non-academic interactions (e.g., services to students, supervising interns) - outside of my official job duties

2 = checked (yes)
blank = did not check (no)

[aXa] I am not directly involved in any type of student advising activities - as part of my official job duties

1 = checked (yes)
blank = did not check (no)

*[naXa] I am not directly involved in any type of student advising activities - as part of my official job duties (recoded [aXa] if analysis showed data entry problem)

1 = checked none of options 1-3 (not involved in advising)
0 = checked at least one option 1-3 (involved in advising)

*[advising] Computed variable that adds all “advising –part of my official duties” together and gives higher weight to [a1a]. $=(a1a * 10) + [a2a]$

*[advising_11] Recodes [advising] to no advising, support for advising, or academic advising.

[r1a] I write research proposals - as part of my official job duties

1 = checked (yes)
blank = did not check (no)

[r1b] I write research proposals - outside of my official job duties

2 = checked (yes)
blank = did not check (no)

[r2a] I perform sponsored research (through the Office of Sponsored Programs Administration, OSPA) - as part of my official job duties

1 = checked (yes)
0 = did not check (no) [changed from blank to be additive]

[r2b] I perform sponsored research (through the Office of Sponsored Programs Administration, OSPA) - outside of my official job duties

2 = checked (yes)
blank = did not check (no)

*[r2c] I perform sponsored research (through the Office of Sponsored Programs Administration, OSPA) (computed from [R2a]+[R2b])

0 Neither
1 Official job duties
2 Outside official job duties
3 Both

[r3a] I perform non-sponsored research (research not through OSPA) - as part of my official job duties

1 = checked (yes)
blank = did not check (no)

[r3b] I perform non-sponsored research (research not through OSPA) - outside of my official job duties

2 = checked (yes)
blank = did not check (no)

[r4a] I support research (e.g., preparing and maintaining materials and equipment for research) - as part of my official job duties

1 = checked (yes)
blank = did not check (no)

[r4b] I support research (e.g., preparing and maintaining materials and equipment for research) - outside of my official job duties

2 = checked (yes)
blank = did not check (no)

[rXa] I am not directly involved in research activities - as part of my official job duties

1 = checked (yes)
blank = did not check (no)

*[research] Computed variable that adds all "research –part of my official duties" together and gives higher weight to [r2a]. $=([r2a] * 10) + [r1a] + [r3a]+[r4a]$

*[research_11] Recodes [teaching] to no research, support for research, or academic research.

[nrXa] I am not directly involved in research activities - as part of my official job duties (recoded [rXa] if analysis showed data entry problem)

1 = checked none of options 1-3 (not involved in research)
0 = checked at least one option 1-3 (involved in research)

[totalX] Professional Staff involved in formal and support areas of teaching, advising, and research (totalX = ntXa + (naXa*2) + (nrXa*4))

- 0 None
- 1 Teaching
- 2 Advising
- 3 Teaching & Advising
- 4 Research
- 5 Teaching & Research
- 6 Advising & Research
- 7 Teaching, Advising, & Research

[ap_sum] Professional Staff involved in formal areas of teaching, advising, and research (SubX = T1a + (A1a*2) + (R2a*4))

- 0 None
- 1 Teaching (Credit)
- 2 Advising (Formal)
- 3 Teaching (Credit) & Advising (Formal)
- 4 Research (OSPA)
- 5 Teaching (Credit) & Research (OSPA)
- 6 Advising (Formal) & Research (OSPA)
- 7 Teaching (Credit), Advising (Formal), & Research (OSPA)

[o1a] I am formally involved in Extension and outreach activities (I have an Extension or outreach appointment) - as part of my official job duties

- 1 = checked (yes)
- blank = did not check (no)

[o1b] I am formally involved in Extension and outreach activities (I have an Extension or outreach appointment) - outside of my official job duties

- 2 = checked (yes)
- blank = did not check (no)

[o2a] I am involved in outreach activities without a formal Extension or outreach appointment - as part of my official job duties

- 1 = checked (yes)
- blank = did not check (no)

[o2b] I am involved in outreach activities without a formal Extension or outreach appointment - outside of my official job duties

- 2 = checked (yes)
- blank = did not check (no)

[o3a] I support outreach (e.g., preparing materials and equipment for outreach) - as part of my official job duties

- 1 = checked (yes)
- blank = did not check (no)

[o3b] I support outreach (e.g., preparing materials and equipment for outreach) - outside of my official job duties

- 2 = checked (yes)
- blank = did not check (no)

[oXa] I am not directly involved in outreach activities - as part of my official job duties

- 1 = checked (yes)
- blank = did not check (no)

[noXa] I am not directly involved in outreach activities - as part of my official job duties

1 = checked none of options 1-3 (not involved in outreach)

0 = checked at least one option 1-3 (involved in outreach)

[oXb] I am not directly involved in outreach activities - outside of my official job duties

Is this necessary?

[noXb] I am not directly involved in outreach activities - outside of my official job duties

Is this necessary?

0 = checked at least one option 1-3 (involved in teaching)

[p1a] I support teaching through administrative responsibilities (e.g., budget, IT, office support) - as part of my official job duties

1 = checked (yes)

blank = did not check (no)

[p1b] I support teaching through administrative responsibilities (e.g., budget, IT, office support) - outside of my official job duties

2 = checked (yes)

blank = did not check (no)

[p2a] I support research through administrative responsibilities (e.g., budget, IT, office support) - as part of my official job duties

1 = checked (yes)

blank = did not check (no)

[p2b] I support research through administrative responsibilities (e.g., budget, IT, office support) - outside of my official job duties

2 = checked (yes)

blank = did not check (no)

[p3a] I support outreach through administrative responsibilities (e.g., budget, IT, office support) - as part of my official job duties

1 = checked (yes)

blank = did not check (no)

[p3b] I support outreach through administrative responsibilities (e.g., budget, IT, office support) - outside of my official job duties

2 = checked (yes)

blank = did not check (no)

[p4a] I provide general support to my unit through administrative responsibilities (e.g., budget, IT, office support) - as part of my official job duties

1 = checked (yes)

blank = did not check (no)

[p4b] I provide general support to my unit through administrative responsibilities (e.g., budget, IT, office support) - outside of my official job duties

2 = checked (yes)

blank = did not check (no)

[p5a] I provide leadership to my unit through administrative responsibilities (e.g., vision, direction, planning) - as part of my official job duties

1 = checked (yes)

blank = did not check (no)

[p5b] I provide leadership to my unit through administrative responsibilities (e.g., vision, direction, planning) - outside of my official job duties

2 = checked (yes)

blank = did not check (no)

[tpairs] Total showing "one or the other" responses

[tsections] Number of sections completed using "one or the other" pattern

[elim_b_responses]

[elim_b_responses_2]

Your Career

[acc_t] Yes, I came to ISU to be involved in teaching

0 = not checked

1 = checked

[acc_a] Yes, I came to ISU to be involved in student academic advising

0 = not checked

2 = checked

[acc_r] Yes, I came to ISU to be involved in research

0 = not checked

4 = checked

[acc_no] No, I did not come to ISU to be involved in teaching, student academic advising, or research

0 = not checked

4 = checked

[nacc_no] No, I did not come to ISU to be involved in teaching, student academic advising, or research

0 None

1 T

2 A

3 TA

4 R

5 TR

6 AR

7 TAR

[major] How close does your professional work at ISU come to your college major(s)?

There is a direct relationship 1

There is a close relationship 2

There is a distant relationship 3

There is no relationship 4

Missing

[cprog] Thinking about your career progression at ISU, would you describe it as:

A matter of coincidence 1

A result of deliberate career planning 2

A combination of coincidence and deliberate career planning 3

Follows departmental career progression 4

Missing

[merit] During your career at Iowa State, have you ever held a position classified as a merit employee?

- 0 no
- 1 yes

[tff] During your career at Iowa State, have you ever held a position classified as a tenure track/tenured faculty member?

- 0 no
- 2 yes

[mer-tff] During your career at Iowa State, have you ever held a position classified as a:

- neither 0
- merit employee 1
- tenure track/tenured faculty member 2
- both 3

With regard to your job at Iowa State, how would you rate your satisfaction in the following areas?

[s_i] The authority you have to make independent decisions

- very satisfied 1
- somewhat satisfied 2
- somewhat dissatisfied 3
- very dissatisfied 4
- Missing NA

[s_pr] Support for professional development

- very satisfied 1
- somewhat satisfied 2
- somewhat dissatisfied 3
- very dissatisfied 4
- Missing NA

[s_ef] Quality of equipment and facilities available to you

- very satisfied 1
- somewhat satisfied 2
- somewhat dissatisfied 3
- very dissatisfied 4
- Missing NA

[s_w] Your workload

- very satisfied 1
- somewhat satisfied 2
- somewhat dissatisfied 3
- very dissatisfied 4
- Missing NA

[s_s] Your salary

- very satisfied 1
- somewhat satisfied 2
- somewhat dissatisfied 3
- very dissatisfied 4
- Missing NA

[s_b] The benefits available to you		
very satisfied		1
somewhat satisfied		2
somewhat dissatisfied		3
very dissatisfied		4
Missing		NA
[s_over] Your job at Iowa State, overall		
very satisfied		1
somewhat satisfied		2
somewhat dissatisfied		3
very dissatisfied		4
Missing		NA

If you could have your ideal job at ISU, it would include:

[i_t] Teaching		
not selected		0
Yes		1
[i_a] Student Academic Advising		
not selected		0
yes		2
[i_r] Research		
not selected		0
yes		4
[i_o] Outreach		
not selected		0
yes		8
[i_admin] Administrative or support services		
not selected		0
yes		16
[i_tot]		
NA		0
Teaching		1
Advising		2
TA		3
Research		4
TR		5
AR		6
TAR		7
Outreach		8
TO		9
AO		10
TAO		11
RO		12
TRO		13
ARO		14
TARO		15
Administration (X)		16
TX		17
AX		18

TAX	19
RX	20
TRX	21
ARX	22
TARX	23
OX	24
TOX	25
AOX	26
TAOX	27
ROX	28
TROX	29
AROX	30
TAROX	31

Working with Faculty

[f_often] How often do you work with faculty members?

I work with faculty at least once per day	1
I work with faculty at least once per week	2
I work with faculty at least once per month	3
I work with faculty less than once per month	4
I never work with faculty	5
Missing	NA

[f_Relat] On the whole, how would you describe your working relationship with faculty?

Very good	1
Good	2
Average	3
Poor	4
Very poor	5
Missing	NA

[ntta] Do you have a non-tenure-eligible faculty appointment?

Yes, I have a non-tenure-eligible faculty appointment.	
No, I do not have a non-tenure-eligible faculty appointment.	
Missing	NA

Please choose those responses that apply to your immediate supervisor.

[is_p] I am supervised by a professional staff member

blank	0
yes	1

[is_f] I am supervised by a faculty member (includes deans, department chairs, and administrators with faculty appointment)

blank	0
yes	2

[is_tot] Supervised combination

neither	0
P&S	1
Faculty	2
Both	3

Background Information

[hd] What is the highest degree you have completed?		
High School Diploma		1
Associate's Degree		2
Bachelor's Degree		3
Master's Degree		4
Doctorate Degree		5
Professional Degree (M.D., D.V.M., J.D., etc.)		6
Missing		NA

How many years in total have you worked:

[yrs_isu] for Iowa State University?

0 - 1	1
2 - 4	2
5 - 9	3
10 - 14	4
15 - 24	5
25 +	6
Missing	NA

[yrs_he] in higher education?

0 - 1	1
2 - 4	2
5 - 9	3
10 - 14	4
15 - 24	5
25 +	6
Missing	NA

[marital] What is your marital status?

Single and never married	1
Married	2
Living with partner or significant other	3
Separated, divorced, or widowed	4
Missing	NA

[dep] How many dependent children do you support? (for this study, a dependent child is a person 24 years old or younger for whom you provide at least half of his/her financial support.)

0	1
1	2
2	3
3	4
4	5
5	6
6	7
7	8
10 or more	11
Missing	NA

[qjob]

[qdemo]

[count] number of answers submitted (out of 72 possible)

* computed or recoded

~ system variables eliminated before analysis

APPENDIX G

Institutional Research Approval

For IRB Use Only	Review Date: _____	IRB ID: _____
	Approval Date: _____	Length of Approval: _____
	Approval Expiration Date: _____	FULL Committee Review: _____
	EXEMPT per 45 CFR 46.101(b): _____ Date: _____	Minimal Risk: _____
	EXPEDITED per 45 CFR 46.110(b) _____	More than Minimal Risk: _____
	Category _____, Letter _____	Project Closed Date: _____

ISU NEW HUMAN SUBJECTS REVIEW FORM**SECTION I: GENERAL INFORMATION**

Principal Investigator (PI): Kevin Kane	Phone: 4-0526	Fax: 4-1717
Degrees: BA, BS, MLA	Correspondence Address: 219 Durham	
Department: Educational Leadership & Policy Studies	Email Address: kkane@iastate.edu	
Center/Institute:	College:	
PI Level: <input type="checkbox"/> Faculty <input type="checkbox"/> Staff <input type="checkbox"/> Postdoctoral <input checked="" type="checkbox"/> Graduate Student <input type="checkbox"/> Undergraduate Student		

Title of Project: University academic professional staff: Augmenting traditional faculty teaching and research roles

Project Period (Include Start and End Date): [mm/dd/yy][09/01/06] to [mm/yy/dd][05/31/07]

FOR STUDENT PROJECTS

Name of Major Professor/Supervising Faculty: Dr. John Schuh	Signature of Major Professor/Supervising Faculty:
Phone: 4-6393	Campus Address: N243 Lagomarcino
Department: Educational Leadership & Policy Studies	Email Address: jschuh@iastate.edu
Type of Project: (check all that apply)	
<input type="checkbox"/> Research <input type="checkbox"/> Thesis <input checked="" type="checkbox"/> Dissertation <input type="checkbox"/> Class project <input type="checkbox"/> Independent Study (490, 590, Honors project) <input type="checkbox"/> Other. Please specify: _____	

KEY PERSONNEL

List all members and relevant experience of the project personnel. This information is intended to inform the committee of the training and background related to the specific procedures that the each person will perform on the project.

NAME & DEGREE(S)	SPECIFIC DUTIES ON PROJECT	TRAINING & EXPERIENCE RELATED TO PROCEDURES PERFORMED, DATE OF TRAINING
Kevin Kane, MLA	PI & Researcher	Human subjects, Fall 2004

Add New Row

FUNDING INFORMATION

Internally funded, please provide account number: NA
Externally funded, please provide funding source and account number: NA
Funding is pending please provide OSPA Record ID on GoldSheet: NA
Title on GoldSheet if Different Than Above: NA

Research Assurances 12/01/2005

1

Other: *e.g., funding will be applied for later.*

SCIENTIFIC REVIEW

Although the assurance committees are not intended to conduct peer review of research proposals, the federal regulations include language such as “consistent with sound research design,” “rationale for involving animals or humans” and “scientifically valuable research,” which requires that the committees consider in their review the general scientific relevance of a research study. Proposals that do not meet these basic tests are not justifiable and cannot be approved. If an assurance review committee(s) has concerns about the scientific merit of a project and the project was not competitively funded by peer review or was funded by corporate sponsors, the project may be referred to a scientific review committee. The scientific review committee will be ad hoc and will consist of your ISU peers and outside experts as needed. If this situation arises, the PI will be contacted and given the option of agreeing that a consultant may be contacted or withdrawing the proposal from consideration.

Yes No Has or will this project receive peer review?

If the answer is “yes,” please indicate who did or will conduct the review: POS Committee

If a review was conducted, please indicate the outcome of the review: Scheduled for September 2006

NOTE: RESPONSE CELLS WILL EXPAND AS YOU TYPE AND PROVIDE SUFFICIENT SPACE FOR YOUR RESPONSE.

COLLECTION OR RECEIPT OF SAMPLES

Will you be: (Please check all the apply.)

Yes No Receiving samples from outside of ISU? See examples below.

Yes No Sending samples outside of ISU? See examples below.

Examples include: genetically modified organisms, body fluids, tissue samples, blood samples, pathogens.

If you will be receiving samples from or sending samples outside of ISU, please identify the name of the outside organization(s) and the identity of the samples you will be sending or receiving outside of ISU:

Please note that some samples may require a USDA Animal Plant Health Inspection Service (APHIS) permit, a USPHS Centers for Disease Control and Prevention (CDC) Import Permit for Etiologic Agents, a Registration for Select Agents, High Consequence Livestock Pathogens and Toxins or Listed Plant Pathogens, or a Material Transfer Agreement (MTA) (<http://www.ehs.iastate.edu/bs/shipping.htm>).

SECTION II: APPLICATION FOR INSTITUTIONAL REVIEW BOARD (IRB) APPROVAL

Yes No Does this project involve human research participants? If the answer “no” is checked, you will automatically moves to a question regarding the involvement of radiation producing devices in your project.

SECTION III: ENVIRONMENTAL HEALTH AND SAFETY INFORMATION (EH&S)

Yes No Does this project involve laboratory chemicals, human cell lines or tissue culture (primary OR immortalized), or human blood components, body fluid or tissues? If the answer is “no” is checked you

will automatically move to a question regarding the involvement of human research participants in your project.

ASSURANCE

- I certify that the information provided in this application is complete and accurate and consistent with any proposal(s) submitted to external funding agencies.
- I agree to provide proper surveillance of this project to ensure that the rights and welfare of the human subject or welfare of animal subjects are protected. I will report any problems to the appropriate assurance review committee(s).
- I agree that I will not begin this project until receipt of official approval from all appropriate committee(s).
- I agree that modifications to the originally approved project will not take place without prior review and approval by the appropriate committee(s), and that all activities will be performed in accordance with all applicable federal, state, local and Iowa State University policies.

CONFLICT OF INTEREST

A conflict of interest can be defined as a set of conditions in which an investigator's or key personnel's judgment regarding a project (including human or animal subject welfare, integrity of the research) may be influenced by a secondary interest (e.g., the proposed project and/or a relationship with the sponsor). ISU's Conflict of Interest Policy requires that investigators and key personnel disclose any significant financial interests or relationships that may present an actual or potential conflict of interest. By signing this form below, you are certifying that all members of the research team, including yourself, have read and understand ISU's Conflict of Interest policy as addressed by the ISU Faculty Handbook (<http://www.provost.iastate.edu/faculty> .) and have made all required disclosures.

- Yes No Do you or any member of your research team have an actual or potential conflict of interest?
 Yes No If yes, have the appropriate disclosure form(s) been completed?

SIGNATURES

Signature of Principal Investigator Date

Signature of Department Chair Date

PLEASE NOTE: Any changes to an approved protocol must be submitted to the appropriate committee(s) before the changes may be implemented.

Please proceed to SECTION II.

SECTION II: IRB SECTION - STUDY SPECIFIC INFORMATION**STUDY OBJECTIVES**

Briefly explain in language understandable to a layperson the specific aim(s) of the study.

The purposes of this study are to develop an understanding of the roles and responsibilities of professional staff involved in the academic and research missions at American research universities and to understand the degree to which these roles overlap with faculty and/or administration roles and responsibilities. This study's importance lies in an understanding of both the professionals that carry out these responsibilities and also in understanding how these staff can be utilized most efficiently for the overall excellence of the university they serve.

The characteristics of professional staff will be identified in order to define and understand this group within the academic workplace and for future comparative studies. Because of the wide-ranging definitions of professional staff in the literature, a standard definition for this study will be proposed. Professional staff for this study generally will be defined as professionals serving the research, outreach, support, and teaching missions of the university who are not part of the tenured/tenure-eligible faculty. However, this is an over-simplified definition as will be explained further in the study.

BENEFIT

Explain in language understandable to a layperson how the information gained in this study will benefit participants or the advancement of knowledge, and/or serve the good of society.

As the missions of our public research universities continue to expand while funding from state and federal sources continue to shrink, the burden placed upon managing the institution's human resources will continue to be a preeminent issue to the administrators of these institutions. Questions such as "How can we serve the same number of students with fewer dollars?" are commonplace for university decision makers around the country.

The significance of this study will be providing an understanding of these duties historically assigned to faculty as a subset of professional positions at the research university and to help university decision makers frame challenging academic, financial and cultural issues that are a result of their decisions to place some faculty roles and responsibilities in the hands of academic professionals.

PART A: PROJECT INVOLVEMENT

- 1) Yes No Is this project part of a Training, Center, Program Project Grant?
Director Name: _____ Overall IRB ID: _____
- 2) Yes No Is the purpose of this project to develop survey instruments?
- 3) Yes No Does this project involve an investigational new drug (IND)? Number: _____
- 4) Yes No Does this project involve an investigational device exemption (IDE)? Number: _____
- 5) Yes No Does this project involve existing data or records?
- 6) Yes No Does this project involve secondary analysis?
- 7) Yes No Does this project involve pathology or diagnostic specimens?
- 8) Yes No Does this project require approval from another institution? Please attach letters of approval.

9) Yes No Does this project involve DEXA/CT scans or X-rays?

PART B: MEDICAL HEALTH INFORMATION OR RECORDS

1) Yes No Does your project require the use of a health care provider’s records concerning past, present, or future physical, dental, or mental health information about a subject? The Health Insurance Portability and Accountability Act established the conditions under which protected health information may be used or disclosed for research purposes. If your project will involve the use of any past or present clinical information about someone, or if you will add clinical information to someone’s treatment record (electronic or paper) during the study you must complete and submit the Application for Use of Protected Health Information.

PART C: ANTICIPATED ENROLLMENT

Estimated number of subjects <i>contacted</i> to reach required enrollment: 2300	
Number of subjects to be enrolled in the study Total: 2300 Males: 1200 Females: 1100	
Check if any enrolled subjects are:	Check below if this project involves either:
<input type="checkbox"/> Minors (Under 18)	<input checked="" type="checkbox"/> Adults, non-students
Age Range of Minors:	<input type="checkbox"/> Minor ISU students
<input type="checkbox"/> Pregnant Women/Fetuses	<input type="checkbox"/> ISU students 18 and older
<input type="checkbox"/> Cognitively Impaired	<input type="checkbox"/> Other (explain)
<input type="checkbox"/> Prisoners	
List estimated percent of the anticipated enrollment that will be minorities <i>if known</i>:	
American Indian:	Alaskan Native:
Asian or Pacific Islander:	Black or African American:
Latino or Hispanic:	

PART D: SUBJECT SELECTION

Please use additional space as necessary to adequately answer each question.

11. Explain the procedures for selecting subjects including any inclusion/exclusion criteria (*i.e., Where will the names come from? Will a sample be purchased, will ads, fliers, word of mouth, email list, etc. be used?*).

All current Professional and Scientific employees from human resources database.

12. Attach a copy of any recruitment telephone scripts or materials such as ad, fliers, e-mail messages, etc. Recruitment material must include a statement of the voluntary and confidential nature of the research. Do not include the amount of compensation, (e.g., compensation available).

Note: Please answer each question. If the question does not pertain to this study, please type not applicable (N/A).

PART E: RESEARCH PLAN

Include sufficient detail for IRB review of this project independent of the grant, protocol, or other documents.

13. Describe the flow of events used in this research protocol. Include information from the first contact with the volunteers to the end of the study. Use a diagram or flow chart if appropriate. Also, include a description of the study procedures or tasks that participants will be exposed to or asked to complete. This information is intended to inform the committee of the procedures used in the study and their potential risk. Please do not respond with “see attached” or “not applicable.”



The methodology is a survey - a voluntary census of all Professional and Scientific employees at Iowa State University. Solicitation will be through an email invitation and follow-up email. The survey itself is a web-based survey that is comprised of 13 questions that will take approximately 5-10 minutes to complete. Secondary data analysis will also be completed from a human resources database of professional staff.

14. For studies involving pathology/diagnostic specimens, indicate whether specimens will be collected prospectively and/or already exist "on the shelf" at the time of submission of this review form. If prospective, describe specimen procurement procedures; indicate whether any additional medical information about the subject is being gathered, and whether specimens are linked at any time by code number to the subject's identity. If this question is not applicable, please type N/A in the response cell.

NA

15. For studies involving deception, please justify the deception and indicate the debriefing procedure, including the timing and information to be presented to subjects. If this question is not applicable, please type N/A in the response cell.

NA

PART F: CONSENT PROCESS

16. Describe the consent process for participants who are age 18 and older. *If the consent process does not include documented consent, a waiver of documentation of consent must be requested.*

The consent process starts with a reminder of the voluntary nature of the survey described in the email of invitation and the follow-up email. The introductory page of the survey reminds participants of the voluntary nature of the survey and that by taking the survey the participants consent is given.

17. If your study involves minors, please explain how parental consent will be obtained prior to enrollment of the minor(s).

The secondary data used in the project is from a public database.

18. Please explain how assent will be obtained from minors (younger than 18 years of age), prior to their enrollment. Also, please explain if the assent process will be documented (*e.g., a simplified version of the consent form, combined with the parental informed consent document*). According to the federal regulations assent "...means a child's affirmative agreement to participate in research. Mere failure to object should not, absent affirmative agreement, be construed as assent."

NA

PART G: DATA ANALYSIS

19. Describe how the data will be analyzed (*e.g. statistical methodology, statistical evaluation, statistical measures used to evaluate results*)

Statistical methodology using SPSS, results grouped - no individual information will be reported. All individual identification information will be stripped from the analysis process. Mainly descriptive statistics with the possibility of some inferential.

20. If applicable, please indicate the anticipated date that identifiers will be removed from completed survey instruments and/or audio or visual tapes will be erased:

11/01/2006 Month/Day/Year

PART H: BENEFITS

21. Describe the benefit to the volunteer from participating in this study, *if any*, and the benefit to society that will be gained from the study. Please note that monetary compensation is not considered a benefit.

Better understanding of the professional staff and faculty responsibilities and interactions.

PART I: RISKS

The concept of risk goes beyond physical risk and includes risks to subjects' dignity and self-respect as well as psychological, emotional, legal, social or financial risk.

22. Yes No Is the **probability** of the harm or discomfort anticipated in the proposed research greater than that encountered ordinarily in daily life or during the performance of routine physical or psychological examinations or tests?
23. Yes No Is the **magnitude** of the harm or discomfort greater than that encountered ordinarily in daily life, or during the performance of routine physical or psychological examinations or tests?

24. Describe any risks or discomforts to the subjects and how they will be minimized and precautions taken. Do **not** respond with N/A. If you believe that there will not be risk or discomfort to subjects you must explain why.

None - results will be grouped and no individual information or identifiers will be reported.

25. If this study involves vulnerable populations, including minors, pregnant women, prisoners, educationally or economically disadvantaged, what additional protections will be provided to minimize risks?

NA

PART J: COMPENSATION

26. Yes No Will subjects receive compensation for their participation? If yes, please explain.

Do not make the payment an inducement, only a compensation for expenses and inconvenience. If a person is to receive money or another token of appreciation for their participation, explain when it will be given and any conditions of full or partial payment. (E.g., volunteers will receive \$5.00 for each of the five visits in the study or a total of \$25.00 if he/she completes the study. If a participant withdraws from participation, they will receive \$5.00 for each of the visits completed.) It is considered undue influence to make completion of the study the basis for compensation.

PART K: CONFIDENTIALITY

27. Describe below the methods that will be used to ensure the confidentiality of data obtained. For example,, who has access to the data, where the data will be stored, security measures for web-based surveys and computer storage, how long data (specimens) will be retained, etc.)

Email addresses will be used for invitation to the survey and to merge the survey data with the secondary database. The researcher will be the only person with the access to this piece of identifying data (email addresses). While the data is being collected by web-based survey it will be on ITS servers under AccessPlus which is protected by ITS security protocols. After the collection of surveys and merging of data, the identification variable (email address) will be removed from the database. As indicated above, this should be accomplished by 11/1/06. Before this date, the database will be stored on a compact disk (and a backup of same). When the data is is being used, the computer used for analysis will not be connected to the Internet. Disks will be locked in PI's office in a locked cabinet while email addresses are attached. After data merger, the CD and backup CD will be destroyed. Data without identifiers will then be safe to store on PI's computer for analysis.

PART L: REGISTRY PROJECTS

To be considered a registry: (1) the individuals must have a common condition or demonstrate common responses to questions; (2) the individuals in the registry might be contacted in the future; and (3) the names/data of the individuals in the registry might be used by investigators other than the one maintaining the registry.

Yes No Does this project establish a registry?

If "yes," please provide the registry name below.

Checklist for Attachments

The following are attached (please check ones that are applicable):

- A copy of the informed consent document **OR** Letter of introduction to subjects containing the elements of consent
 A copy of the assent form if minors will be enrolled
 Letter of approval from cooperating organizations or institutions allowing you to conduct research at their facility
 Data-gathering instruments (including surveys)
 Recruitment fliers, phone scripts, or any other documents or materials the subjects will see

Two sets of materials should be submitted for each project – the original signed copy of the application form and one copy and two sets of accompanying materials. **Federal regulations require that one copy of the grant application or proposal be submitted for comparison with the application for approval.**

FOR IRB USE ONLY:

Initial action by the Institutional Review Board (IRB):

- Project approved. Date: _____
 Pending further review. Date: _____
 Project not approved. Date: _____

Follow-up action by the IRB:

IRB Approval Signature

Date

SECTION III: ENVIRONMENTAL HEALTH AND SAFETY INFORMATION

Yes No Does this project involve human cell or tissue cultures (primary OR immortalized), or human blood components, body fluids or tissues? If the answer is “no”, please proceed to SECTION III: APPLICATION FOR IRB APPROVAL. If the answer is “yes,” please proceed to Part A: Human Cell Lines.

PART A: HUMAN CELL LINES

Yes No Does this project involve human cell or tissue cultures (primary OR immortalized cell lines/strains) that have been documented to be free of bloodborne pathogens? If the answer is “yes,” please attach copies of the documentation. If the answer is “no,” please answer question 1 below.

1) Please list the specific cell lines/strains to be used, their source and description of use.

CELL LINE	SOURCE	DESCRIPTION OF USE

Add New Row

2) Please refer to the ISU “Bloodborne Pathogens Manual,” which contains the requirements of the OSHA Bloodborne Pathogens Standard. Please list the specific precautions to be followed for this project below (e.g., retractable needles used for blood draws):

--

Anyone working with human cell lines/strains that have not been documented to be free of bloodborne pathogens is required to have Bloodborne Pathogen Training annually. Current Bloodborne Pathogen Training dates must be listed in Section I for all Key Personnel. Please contact Environmental Health and Safety (294-5359) if you need to sign up for training and/or to get a copy of the Bloodborne Pathogens Manual (<http://www.chs.iastate.edu/bs/bbp.htm>).

PART B: HUMAN BLOOD COMPONENTS, BODY FLUIDS OR TISSUES

Yes No Does this project involve human blood components, body fluids or tissues? If “yes”, please answer all of the questions in the “Human Blood Components, Body Fluids or Tissues” section.

1) Please list the specific human substances used, their source, amount and description of use.

SUBSTANCE	SOURCE	AMOUNT	DESCRIPTION OF USE
<i>E.g., Blood</i>	<i>Normal healthy volunteers</i>	<i>2 ml</i>	<i>Approximate quantity, assays to be done.</i>



Add New Row

- 2) Please refer to the ISU "Bloodborne Pathogens Manual," which contains the requirements of the OSHA Bloodborne Pathogens Standard. Specific sections to be followed for this project are:

Anyone working with human blood components, body fluids or tissues is required to have Bloodborne Pathogen Training annually. Current Bloodborne Pathogen Training dates must be listed in Section I for all Key Personnel. Please contact Environmental Health and Safety (294-5359) if you need to sign up for training and/or to get a copy of the Bloodborne Pathogens Manual (<http://www.ehs.iastate.edu/bs/bbp.htm>).

FOR ENVIRONMENTAL HEALTH AND SAFETY USE ONLY

Signature of Biological Safety Officer

Date

Please answer each question. If the question does not pertain to this study, please type not applicable (N/A).

SECTION I: KEY PERSONNEL

- Yes No Have there been any personnel/staff changes since the last IRB approval was granted?
If yes, complete the following sections (Additions/Deletions) as appropriate.

Add	Delete	Last Name	First Name

Add New Row

List all members and relevant experiences of the project personnel. This information is intended to inform the committee of the training and background of the investigators and key personnel.

NAME & DEGREE(S)	POSITION AT ISU & ROLE ON PROJECT	TRAINING & DATE OF TRAINING
Kevin Kane, MLA	PI & Researcher	Human Subjects, 9/6/04

Add New Row

SECTION II: CONTINUING REVIEW

In addition to completing Section I: Key Personnel, please complete Section II if this is an application for Continuing Review. If this is an application for continuing review and you will be modifying your project in the future, please complete all sections of the form. If this application is only to request approval for a modification or change to your study, please complete Section I: Key Personnel and Section III: Proposed Modifications or Changes.

- Yes No Is the research **permanently** closed to the enrollment of new subjects?
- Yes No Have **all** subjects completed all research-related interventions?
- Yes No Does research remain active only for long-term follow-up of subjects?
- Yes No Are the remaining research activities limited to data analysis?
- Yes No Subject enrollment has not begun and no additional risks have been identified.

Part A: Enrollment Status

Number of Subjects Approved by IRB:	Number of Subjects Consented to Date:
Number of Subjects Consented Since Last Continuing Review: Total: Males: Females:	
Number of Subjects Screened:	Number of Subjects Lost to Follow-up:
Check if any enrolled subjects are: <input type="checkbox"/> Minors (under 18). Age Range of Minors: _ <input type="checkbox"/> Pregnant Women/Fetuses <input type="checkbox"/> Cognitively Impaired <input type="checkbox"/> Prisoners	Check below if this project involves either: <input type="checkbox"/> Existing Data/Records <input type="checkbox"/> Secondary Analysis <input type="checkbox"/> Pathology/Diagnostic Specimens
List Estimated Percent of the Total Enrolled That Are Minorities Below	
American Indians:	Alaskan Native:
Asian or Pacific Islander:	African American:
Black (Not of Hispanic Origin):	Hispanic:

- Yes No Have any subjects withdrawn or have you asked any subjects to withdraw from the study?

List number for each and reason for withdrawal:

Part B: Protocol Summary – Please use the amount of space needed to adequately address the questions.

1. Please provide a concise summary of the purpose and main procedures of the study.

2. Please provide a summary of how the study is progressing (e.g., progress to date in terms of the overall study plan, success or problems encountered, reasons enrollment has not begun, etc.)

3. Is there any new information (positive or negative) from this study (e.g., interim analysis) or elsewhere (e.g., current literature) that might affect someone's willingness to enroll or continue in the study. It is especially important for the investigator to notify the IRB of literature or information that's relevant to the risks participants in the study.

4. Please provide a summary of amendments or modifications since last IRB review.

Part C: Adverse Events and Unforeseen Problems

1. Yes No Have there been any adverse events or unanticipated problems involving risks to subjects or other people?

If yes, please give them numbers and describe.

If yes, was it reported to the IRB? Date reported
If report was not submitted, please explain why.

2. Yes No Have there been any subject complaints?

If yes, please describe.

Attach any reports submitted to NIH or a Data and Safety Monitoring Board. Attached N/A

Part D: Informed Consent

1. Yes No If a signed Informed Consent Form was required, was Informed Consent obtained from all subjects?

If no, please explain.

HSO/ORC 09/03/03

2. Yes No Are all signed Informed Consent Forms on file with the PI?

If no, please explain.

- 3.
- Attached Submit copy of currently approved Informed Consent Form and an original unstamped copy.
 N/A (if stamped). If changes have been made please submit the original, a copy with the highlighted changes, and a copy to be stamped with IRB approval.
- Attached Submit currently approved informational letter.
 N/A

SECTION III: PROPOSED MODIFICATIONS OR CHANGES

If this application is to request approval for modification or changes to your project, please complete Section I: Key Personnel and Section III.

The submission of a modification form is required whenever changes are made to an approved project. This includes but is not limited to a title change, changes in investigators, resubmission of a grant proposal involving changes to the original proposal, changes in the funding source, changes of an instrument, advertisements, reports from a data safety and monitoring board, addition of a test instrument, etc. **NOTE: All changes must be submitted and approved by the IRB prior to their implementation, unless the change is necessary to protect the safety of subjects.**

1. Does your project require approval from another institution, please attach letters of approval?

Yes No

2. The following modification(s) are being made (check all that apply):

- Change in protocol.
 Change in type or total number of subjects. New anticipated total:
 Change in informed consent document.
 Change in co-investigator(s). New co-PI name:

Signature of new Co-PI: _____

- Change in funding source/sponsor. Please attach copy of grant proposal sent to new funding agency.
 Other (e.g., change in project title, adding new materials, adding advertisement, etc.)

NOTE: If the change involves a new Principal Investigator, a new Human Subjects Review form must be submitted.

3. Describe the modification(s) indicated above in sufficient detail for evaluation independent of any other documents. If the change is to the informed consent document, submit a copy of the currently approved document, one clean copy of the new informed consent document, and a copy of the new informed consent document with changes highlighted.

Protocol Change: Using SurveyMonkey web survey tool instead of AccessPlus survey system.

Instrument Change: Changes implemented upon suggestions of POS Committee and more pretesting of approved instrument. These include:

- Asking for job responsibilities considered both "official" and "unofficial" in questions 1-5.
- Adding a question on level of job satisfaction
- Clarifying supervision question
- Adding questions about relationships with faculty members

In addition, several independent variables were added to the study:

- Adding several demographic questions to the survey instrument that mirror similar demographic questions in the National Study of Postsecondary Faculty 2004 Instrument including highest degree completed, marital status, and number of dependent children.
- Additional information from the secondary dataset from human resources was requested including race/ethnicity, gender, and age.

An updated copy of the survey instrument is attached.

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