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THE EVOLVING AMERICAN RESEARCH UNIVERSITY AND NON-FACULTY PROFESSIONAL WORK

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THE EVOLVING AMERICAN RESEARCH UNIVERSITY AND NON-FACULTY PROFESSIONAL WORK

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The Evolving American Research University and Non-Faculty Professional Work

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This exploratory study was a response to claims that non-faculty professionals at universities were the cause of "administrative bloat". The purpose of the study was to build from the work of Rhoades (1998) and Kane (2007) to determine whether non-faculty professional employees at the University of Texas at Austin (UT Austin) performed core university work of research, teaching and/or public service. In the spring of 2012 a survey was sent out to 1036 UT Austin non-faculty professional employees. The survey results determined that a sizable number of non-faculty professional employees at UT Austin were performing or directly contributing to research, teaching and/or public service. In addition to the three areas of core work, it was determined that non-faculty professional employees at UT Austin had advanced degrees, published in peer-reviewed journals, had specialized skills and bodies of knowledge, applied for grants and engaged in entrepreneurial activities.

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CHAPTER 1: INTRODUCTION

The contemporary American research university, which began around 1920 (Geiger, 1986), has continued to grow and evolve over the 20th Century, becoming what Kerr (2001) terms the "multiuniversity"—an "inconsistent institution" comprised of multiple communities with "fuzzy" edges (p. 14). Within this "multiuniversity," the work that faculty members historically performed has evolved from a primary emphasis on teaching to a significant focus on research (Terpstra & Honoree, 2009). Additionally, today's "multiuniversities" offer a variety of services and products to various external markets, such as athletic events to the entertainment market; emerging technologies to the consumer market; and a variety of outreach services to underrepresented communities.

The expanding mission and resulting shift in the nature of faculty university work has significantly changed the composition of the institution's workforce. More specifically, there is evidence that a category of employees labeled as "non-faculty professionals" are performing work traditionally considered the exclusive domain of faculty. The growing organizational complexity and shifting workforce has created the need to reexamine how work is defined, structured, accounted for, and managed within the "multiuniversity."

Scholars provide several explanations for the growth of "non-faculty professional" employees. Rhoades et al. (2008) and Sherwood (2004) provide evidence that service and outreach are major components of university work. Slaughter and Rhoades (2004) and others provide evidence that universities are compensating for diminishing state and federal funds by striving to enhance the entrepreneurial arm of the organization. As researchers explore the effects of such organizational transitions, they are uncovering challenges with current institutional accounting and management

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practices related to some employees' roles and responsibilities within higher education. The purpose of this study was to contribute to the lively discussion of the growth of American research universities by studying the work of non-faculty professionals at UT Austin additional. The effort may provide alternate approaches for how to calculate and report the work of higher education institutions.

BACKGROUND

Recent data from the Integrated Postsecondary Education Data System (IPEDS), which is a warehouse of education survey data that is run by the U.S. Department of Education's National Center for Education Statistics (NCES), suggest a shifting workforce within higher education. The data show the "other professional" category to be the fastest growing of the eight categories of employees (Snyder & Dillow, 2011):

1. Executive, administrative, and managerial employees

2. Faculty (instructional/research/public service)

3. Instruction/research assistants

4. Other professionals (support/service)

5. Technical staff and paraprofessionals

6. Clerical and secretarial staff

7. Skills crafts staff

8. Service/maintenance

The IPEDS describes "other professionals" as "staff employed for the primary purpose of performing academic support, student service, and institutional support, whose assignments would require either a baccalaureate degree or higher or experience of such kind and amount as to provide a comparable background. IPEDS descriptions for all eight employee categories appear in Appendix A.

In the period from 1976 to 2009, the "faculty" category grew slightly from 34% to 38.7%. Within the same period, the "other professional" category more than doubled in size from 9.6% to 20.7% (Snyder & Dillow, 2011, p. 373). The significant numbers associated with the "other professional" category has prompted questions from legislators and others as to the nature of the work these employees perform and whether their positions are justified and constitute a necessary expense. The Goldwater Institute, a non-profit organization from Phoenix, Arizona whose mission is to, "advance freedom and protect the Constitution (Goldwater Institute Who We Are, 2012)"; released a report in August of 2010 suggesting that American Universities were "administratively bloated" (Greene et al., 2010). The report received national and local media coverage which prompted universities to respond to the issue.

The responses to the Goldwater Institute report show how universities are struggling to explain their organizational missions. For example, UC Davis criticized the Goldwater Institute report for presenting a "distorted view of true administrative growth." According to the UC Davis Office of Budget and Institutional Analysis, the Goldwater Institute report is in error because it misinterprets administrative work, its relationship to the university's mission, and its funding stream:

> Many of the employees that the policy report classifies and counts as UC Davis "administrators" actually are staffers in direct service to the campus's core academic mission of teaching, research and public service, and who work in academic departments… (UC Davis, 2010)

In addition, and just as important, many of the employees the Goldwater report classifies and counts as "administrators" actually are supported by research grants from federal, state and local agencies. That means that neither state general fund dollars nor student fees support those employees, who, in fact, are central to the research and public service missions of the university (UC Davis, 2010).

Scholars who have studied the growth of the "other professional" category show evidence that, as faculty focus their efforts more on research, the other aspects of their traditional work are being performed by other non-faculty professionals (Slaughter and Rhoades, 2004). These scholars also state that the expanding university mission, which includes outreach and entrepreneurship, has developed the need for non-faculty specialists with professional expertise to perform the new work.

CORE UNIVERSITY WORK

Traditionally, the terms teaching, research, and service have been used simultaneously to describe the mission of the American research university and the work of faculty (Birnbaum, 1988). A primary concern with the use of these terms is that they vary from institution to institution (Birnbaum, 1988). The literature on teaching, research, and service is vast. Much of this literature focuses on teaching, research, and service as it relates to faculty work (Rosser and Tabata, 2010). The basic understanding from this field of literature is that teaching represents instruction, student advising, and educational assessment; research represents pure and applied research; and service represents efforts beneficial to the internal university community (e.g. participating on committees) and/or outreach to external communities (e.g. running a community clinic) (Calahon, 2011; Gibbons et al., 1994; Groccia, 2012; Rosser & Tabatta, 2010).

There are two main components to this research study on non-faculty professional work. The first is the development of a framework for discussing mission-critical or core university work. The second component is to gain an understanding of the work itself. This effort requires development of clear definitions for this human effort and a framework for classifying the work. The current method for defining and classifying the

work of non-faculty professionals is problematic because it assumes that the only work which fulfills the university mission is performed by faculty.

PROBLEM STATEMENT

An enhanced understanding is needed to determine how non-faculty professional work relates to the core work of the university. The significant numbers associated with the "other professional" category have caused legislators and others outside the academy to ask why the category of non-faculty employees is growing at such a rapid rate. Although some use this as an example of bloat, sections that follow show that university missions have evolved and that there are players other than faculty performing both traditional and evolving university core work. An improved method for describing and classifying university work is needed to ensure that universities are better able to understand, communicate and report their work to the public.

STUDY PURPOSE

The purpose of the study is to build from the research of Rhoades (1998, 2007), Kane (2007), and others to understand the work of non-faculty professional staff and to decipher if some of the responsibilities of these individuals are considered work central to the core mission of the university. This study utilizes organizational theories relating to work evolution and empirical research to develop a framework for defining core university work. The framework is then employed to classify the work of non-faculty professional employees.

The study is limited to one site in an effort to have tighter control over terms and definitions related to university core work of teaching, research and public service. Lack of clarity and control over these terms relating to non-faculty professionals, is a key issue cited by Rhoades (1998). The University of Texas at Austin (UT Austin) was selected as

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the site for this study because it matches many of the descriptions of organizational structure and work discussed in other studies. The institution is classified in the Carnegie Classification System as a four-year public research university with very high research activity (The Carnegie Foundation for the Advancement of Teaching, 2011).

RESEARCH QUESTIONS

1. Do non-faculty professionals at the UT Austin conduct research?
2. Do non-faculty professionals at the UT Austin teach?
3. Do non-faculty professionals at the UT Austin conduct public service?

METHODOLOGY

The methodological approach includes a combination of case study, workforce and job analysis, and survey research. These methods contribute to the development of a mechanism for defining terms and classifying university work.

The case study method serves as a research strategy to have better control over terms to describe university work. The literature review reveals that there are inconsistencies between the terms used to describe and classify university work. UT Austin was selected because of its broad mission which includes teaching, research, service and entrepreneurial activities. At the time of the survey (March 2012) there were N=4,946 non-faculty professional employees at UT Austin. These employees represented 252 different departments and had 274 different job titles.

The workforce analysis utilized job incumbent information which was secured from UT Austin Human Resource Management System. Job titles and university departments were sorted into larger categories. These categories, which can be viewed in Appendix E, were utilized to better understand the type of work "other professionals" performed.

Job analysis was used to gain an understanding of the work being performed within the "other professional" category. The purpose of the job analysis is "directed toward discovering, understanding, and describing what people do at work" (Brannik et al., 2007, p. 1). Job analysis concepts were used to develop the survey tool, which had fifty-five questions that asked survey respondents to describe their work activities, especially those directed at research, teaching, and public service. The job analysis data will produce work descriptions that can be categorized to understand the work of an entire group.

DELIMITATIONS

This study focused on the functions/work of the IPEDS "other professional" category. Other categories of employees within the IPEDS classification system were not included in the study because the categories have not experienced significant growth since 1976.

UT Austin was selected because of its size, complexity, and mission, which are comparable to other large, American research universities. UT Austin was also selected for convenience as the researcher is an employee in the university's human resources department. While samples of convenience can be seen as non-purposeful (Miles & Huberman, 1994), the nature of the study requires both intimate knowledge of the organization and contacts within that organization to ensure high levels of participation in the study. Thus, we do not believe that utilizing a sample of convenience is a drawback in this case.

LIMITATIONS

The first of three limitations relates to the lack of generalizability as the study is limited to one university with a limited sample size for the purpose of job analysis. The

lack of generalizability is not problematic since the purpose of the study was to test the core work classification mechanism and survey tool. Future studies can then utilize the work classification model and survey tool to conduct studies with a larger scope.

The second limitation arises from the job analysis method in which university employees self-report their job duties, thus creating the potential for misrepresentation and inaccuracy in responses. The third limitation involves researcher bias, as the researcher is an employee of the university under study. Any potential for bias on the researcher's part is mitigated by the fact that her background in human resources provides a perspective and experience that benefits this study.

THEORETICAL, CONCEPTUAL, CONTEXTUAL FRAMEWORKS

Several theoretical, conceptual and contextual frameworks, derived from two bodies or sets of research literature, are used to guide and inform this study. The first body or set builds the case for researching non-faculty professionals by suggesting that, as universities expand their missions, there are more professionals, other than faculty, performing work traditionally defined as "core work." The second supplies the theory for building a framework for studying evolved organizations and shifting core work.

Representing the first body of literature, Kane (2007) and Rhoades (1998) provide evidence that non-faculty professionals are performing work that was traditionally performed by faculty, including teaching for-credit courses, advising, and research. Slaughter and Rhoades (2004) provide evidence that universities are engaged in entrepreneurial activities driven largely in an attempt to generate new revenue sources in order to replace diminishing state and federal funds.

The second body of literature focuses on organizational theory and the concept of core work. As such, it provides the foundation for developing a framework to describe

university core work. For instance, Mintzberg (1979) describes a hybrid organizational structure that can be applied to universities. In this hybrid model, there are two operating cores (two places where core work is performed). One is focused and specialized while the other is ambiguous and innovative. In this model, focused and specialized work is performed by faculty, and the innovative ambiguous work is performed by non-faculty professionals. Mintzberg's (1979) organization theory offers a view of higher education work structure that matches empirical descriptions of how university work is currently being performed.

Sigglekow's (2002) theory of core work emphasizes the work itself and how that work can evolve over time. Sigglekow (2002) uses the terms "core element" and "elaborating element" in his model of work, where the "core element" represents the core work while the "elaborating element" represents the activities necessary to produce the "core element." Thus, in higher education, teaching can be a core element, with the distribution of teaching over the web or student advising as its elaborating elements.

DEFINITIONS

Defining terms is an important and central part of this research project. The terms under study are organized into three types: (1) Job and work terms—these are the terms associated with job analysis and the description of types of work; (2) University Work Categories—these are terms used to describe the nature of work performed by university employees; and (3) Systems—these terms represent the sources from which data will be extracted.

Job and work terms

The unit of analysis for the study is the individual employee with a primary focus on job duties. To define job duties, one must look at the work spectrum, which is

represented visually in Figure 1.1. At the broadest level is the "job group" which is a "series of jobs that make-up an area of work" (Brannick et al., 2007, p. 6). At the most specific level is the "element of work" which is defined as "the smallest unit of work that can be identified as having a clear beginning, middle, and end." A "job duty" is in between these two work descriptors on the spectrum and is defined as "a collection of tasks all directed at general goals of a job" (Brannick et al., 2007, p. 6). Figure 1.1 provides an example of how work is defined for a job within the Library and Information Science "job group."

Job Group	Library and
Series of jobs that make up an area of work	Information Science

⇩

Job	
Work content performed by a group of people with similar work	Professional Librarian

⇩

Position	Professional Librarian
Set of duties, tasks, activities, and elements about to be performed by a single worker	for Humanities Research

⇩

Duty	Coordinate and
Collection of tasks all directed at general goals of a job	maintain library stacks

⇩

Tasks	Create and maintain
Collection of activities directed toward the achievement of specific job objectives	book collection accession and location information

⇩

Activity	Assign Dewy Decimal
Clusters or groups of elements directed at fulfilling a work requirement	codes to books

⇩

Element	Place Dewy Decimal
Smallest unit of work that can be identified as having a clear beginning, middle and end	label on book

Figure 1.1: Work Spectrum Based on Brannik et al. (2007) Work Definitions

University work categories

    This study will focus primarily on two IPEDS categories: "other professional" and "faculty." Within the IPEDS "other professional" definition, the terms "academic support," "student service," and "institutional support" are used to broadly describe the work of the "other professional" category. "Within the "faculty" definition, the terms "instruction," "research," and "public service" are used broadly to describe faculty work. The full IPEDS definitions are presented below, followed by Figure 1.2, which further illustrates the "other professional" and "faculty" work categories.

Other professional

    A primary function or occupational activity category used to classify persons employed for the primary purpose of performing academic support, student service, and institutional support, whose assignments would require either a baccalaureate degree or higher or experience of such kind and amount as to provide a comparable background. Included in this category are all employees holding titles such as business operations specialists; buyers and purchasing agents; human resources, training, and labor relations specialists; management analysts; meeting and convention planners; miscellaneous business operations specialists; financial specialists; accountants and auditors; budget analysts; financial analysts and advisors; financial examiners; loan counselors and officers; computer specialists; computer and information scientists, research; computer programmers; computer software engineers; computer support specialists; computer systems analysts; database administrators; network and computer systems administrators; network systems and data communication analysts; counselors, social workers, and other community and social service specialists; health educators; clergy; directors, religious activities and education; lawyers;

librarians, curators, and archivists; museum technicians and conservators; librarians; artists and related workers; designers; athletes, coaches, umpires; dancers and choreographers; music directors and composers; chiropractors; dentists; dietitians and nutritionists; optometrists; pharmacists; physicians and surgeons; podiatrists; registered nurses; therapists; and veterinarians (The Integrated Postsecondary Education Data System-Glossary, 2012).

Faculty

Persons identified by the institution as such and typically those whose initial assignments are made for the purpose of conducting instruction, research or public service as a principal activity (or activities). They may hold academic rank titles of professor, associate professor, assistant professor, instructor, lecturer or the equivalent of any of those academic ranks. Faculty may also include the chancellor/president, provost, vice provosts, deans, directors or the equivalent, as well as associate deans, assistant deans and executive officers of academic departments (chairpersons, heads or the equivalent) if their principal activity is instruction combined with research and/or public service. The designation as "faculty" is separate from the activities to which they may be currently assigned. For example, a newly appointed president of an institution may also be appointed as a faculty member. Graduate, instruction, and research assistants are not included in this category (The Integrated Postsecondary Education Data System-Glossary, 2012).

Other Professional

Academic Support
- Supports institutional mission
  - Teaching
  - Research
  - Service

Student Service
- Admissions
- Registrar Activities
- Activities with primary purpose of contributing to
  - Student Well being
    - Emotional
    - Physical
  - Student Development
    - Intellectual
    - Cultural
    - Social

Institutional Support
- Day –to-day operational support of institution
  - General admin service
  - Central-executive-level activities
  - Management
  - Long Range Planning
  - Legal
  - Fiscal Operations
  - Development
  - Space management
  - Employee personnel and records
  - Logistical services
  - Public Relations
  - Information Technology

Faculty

Instruction
- General academic instruction
- Occupational and vocational instruction
- Community education
- Preparatory and adult basic education
- Includes expenses for credit and non-credit activities
- Excluded
  - Academic administration
  - IT expense if institution budgets separately

Research
- Activities specifically organized to produce research outcomes

Public Service
- Provide non-instructional services beneficial to individuals and groups external to institution
  - Community services
  - Cooperative extension services
  - Public broadcasting services
  - Information technology expenses

Figure 1.2: IPEDS (2011) "Other Professional" and "Faculty" Work Categories

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Data Sources

Two data sources—one national and one local—were utilized during the content analysis portion of the study:

UT Austin HRMS (Human Resource Management System)
This is the employee and accounting database for UT Austin.

IPEDS (Integrated Postsecondary Data System)

IPEDS is the Integrated Postsecondary Education Data System. It is a system of interrelated surveys conducted annually by the U.S. Department of Education's National Center for Education Statistics (NCES). IPEDS gathers information from every college, university, and technical and vocational institution that participates in the federal student financial aid programs. The Higher Education Act of 1965, as amended, requires that institutions that participate in federal student aid programs report data on enrollments, program completions, graduation rates, faculty and staff, finances, institutional prices, and student financial aid. These data are made available to students and parents through the College Navigator college search Web site and to researchers and others through the IPEDS Data Center (About IPEDS, 2011).

SUMMARY

The purpose of this study is to discover whether UT Austin employees who were classified as "other professionals" in the IPEDS system, performed core university work of teaching, research and/or public service. This study focused on the "other professional" category because national data revealed it to be the fastest growing of the eight employment categories, and it was at the center of much discussion regarding "administrative bloat" within higher education institutions.

There were two main components to this research. The first was to develop a framework for discussing core university work. The second was to understand the work itself. This required having clear definitions for the work and a framework for classifying that work.

The methodological approach utilized a combination of case study, workforce and job analysis, and survey research. All methods were needed to develop a mechanism for defining terms and classifying university work. The next section will review literature that informed the study.

CHAPTER 2: LITERATURE REVIEW

The first section of the literature review surveys theory on the evolution of university work; it also explores existing frameworks, descriptions and definitions of core work. The second section reviews theoretical frameworks for describing organizational structures and core work. Both sections will provide empirical examples within higher education that match the theory presented.

EVOLUTION OF UNIVERSITY WORK AND THEORETICAL FRAMEWORKS

It is clear that the university's work and mission have evolved over the past century. As the university continues to evolve, internal and external parties comment on ineffectiveness and a need for organizational refinement. Kerr's (2001) "multiuniversity" concept offers a description of the American research university that attempts to explain the complexity of the organization. He describes it as an "inconsistent institution" that is comprised of multiple communities with "fuzzy" edges (p. 14). This section reviews a body of theory that describes how work within the American research university has evolved.

Work evolution theory

Rhoades (1998), Kane (2007), and others suggest that as larger productivity demands are placed on faculty, some work traditionally performed by faculty is now being performed by segments of non-faculty professionals. They further state that the line between non-faculty professionals and faculty is becoming blurred. This evolution of work is typical in higher education; according to Miner and Estler (1985), such evolution is evidence of "accrual mobility":

> Accrual mobility occurs through evolved jobs in which the 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. The result is movement not into fixed positions but into previously nonexistent jobs (Miner & Estler, p. 121).

Accrual mobility goes against traditional job classification methods which are focused on pre-determined job classifications and roles. In large public research universities, it becomes a challenge to understand the work of employees whose jobs have evolved. Their job classification may not reflect the work they perform; especially if their work is not reviewed on a regular basis.

Work evolution descriptors for non-faculty professionals

As mentioned earlier, Rhoades (1998) and Kane (2007) provide theory and research suggesting that some work traditionally performed by faculty is now being performed by segments of non-faculty professionals. They also identify a problem: the variation and inconsistency between terms used to describe this segment of university employees is inconsistent and unclear.

Managerial professionals

"Managerial professionals" is a term Gary Rhoades (1998) uses to refer to a segment of the non-faculty professional workforce that has shown significant growth over the past decade. According to Rhoades:

These are personnel with advanced degrees who are neither faculty nor senior administrators. . . . (they) have professional associations, journals, and bodies of technical knowledge. . . . they are increasingly involved in key activities from assessing quality and ensuring accountability to providing student consumer services to facilitating the production of instruction and research to engaging in entrepreneurial activities (Rhoades 2006, pp. 389-90).

Traditionally higher education institutions have separated the work of faculty from the rest of the university. Faculty are considered "production workers": those who produce educated students and research (Rhoades, 1998, p. 117). However, Rhoades (1998) critiques the idea that faculty are the only "production workers." He calls for a deeper look into the "sector of the professional workforce in higher education that is becoming increasingly significant in and central to the missions of colleges and universities" (p. 143).

Rhoades' (1998) "managerial professionals" are located in different parts of the university. They can be found in central administrative offices, in colleges, and in research centers. Identifying and describing managerial professional work can be challenging because of the decentralized nature of universities. Current broad descriptors used to define the work of managerial professionals are problematic because they tend to over-simplify the complexity of their roles. Rhoades (1998) addresses this issue with his argument for rethinking administrative costs when he argues that higher education institutions should overcome the "dichotomy of administration versus faculty" (p. 111).

Rhoades (1998) provides a cost analysis which shows that administrative costs are incurred across the entire university both in central administration and within individual academic units. Rhoades (1998) identifies "administration" as a "broad, non-faculty residual category" (p. 112) in which all non-faculty work is lumped into one data set. He proposes three dimensions of disaggregation needed to better understand administrative costs in higher education. The first dimension refers to looking at the work being performed "within" functional divisions such as student services, institutional support, and public relations. The second dimension of disaggregation involves rethinking the word "administrator" as an all-encompassing grouping of non-faculty professionals. The third dimension of disaggregation is to move past the idea of "central administration" as

an identifier for all non-faculty professional work. He states that there are non-faculty professionals who perform executive, support, and professional work within academic units. He specifically states:

> …academic, colleges, departments, center/interdisciplinary units, and research units have executive, support, and non-professional personnel. Many academic deans particularly in professional schools, not only have associate deans for academic affairs and /or for student services, they also have support professionals in development, business (and sometimes research), and computer support. Most academic units in science, math, engineering, and health sciences have various support professional and non-professional personnel such as lab technicians and grants writers. Administrative costs extend below and outside the central offices of campuses (indeed, they may even be counted as "instructional" costs) (Rhoades, 1998, p. 113).

Rhoades (1998) suggests that current cost analysis methods lose sight of the activities being conducted at the departmental level. He also subtly states that some of the administrative work being incurred at the departmental level could be "counted as instructional costs" (p. 113).

The three levels of disaggregation provide a structure for thinking about administrative costs. Assuming that all administrative costs are incurred centrally provides a limited view of what is happening at the departmental level, and possibly miscalculates administrative costs. In addition, "other professional staff" is a broad category that does not differentiate between support staff and production staff. Based on this analysis, further clarification and understanding of managerial professionals and their work is needed to know how to appropriately categorize and account for the cost of their work.

More non-faculty professional evolution descriptors

Other researchers have described the evolution of work of non-faculty professionals. However, it is difficult to draw comparisons across their studies since each classifies non-faculty professionals in slightly different ways. Kane (2007) studied a group of Iowa State University employees whom he termed "academic professional staff" because they contributed to the teaching and research mission of the university. The research method had employees self-identify whether their job included "direct academic responsibility including teaching (teaching a credit or R-credit course), research (directly involved in a research project carrying out the actual research), and advising students." (Kane 2007, p. 45) Kane concluded that 23.7% of these non-faculty professional staff self-identified that they had job responsibilities that were traditionally carried out by tenure-eligible faculty. Kane's research suggested that employees other than faculty were performing core university work (work directly tied to the mission of teaching and research). In addition to teaching and research, Kane (2007) offered analysis on outreach activities, education attainment, how administrative professionals were distributed by departments, and job classifications. On these additional variables, Kane (2007) found that of the 23.7% of academic professionals, almost half (47.4%) worked under the vice-president for research, advisory and scientist job titles showed the highest percentage at 77.8% and 64.2% respectively, the majority had at least a master's degree, and 22.5% of total respondents (*n*=1518) indicated they were formally involved in extension/outreach activities. While Kane (2007) asked about outreach activities he did not include these results in his analysis. Outreach activity, which Kane (2007) defined as formally involved in extension/outreach activities, were performed by 22.5% of all respondents.

THEORETICAL FRAMEWORKS FOR ORGANIZATIONAL STRUCTURE AND CORE WORK

While there is knowledge and theory for describing universities as organizations, there are unclear and inconsistent frameworks for describing university work. Defining organizational core work is the starting point for building a framework for classifying university work. In order to identify core work it is first important to understand the organizational configuration of the university. This section reviews the work of Mintzberg (1979) and Siggelkow (2002). Mintzberg (1979) provides a framework for discussing the organizational structure of universities. Siggelkow (2002) provides theory which grounds how organizational work is structured and described.

Organizational structure related to core work

Mintzberg's (1979) "The Structuring of Organizations" offers a typology for describing how organizations are structured and the complexity of activities, roles and functions within them. Mintzberg (1993) defines organizational structure as "simply the sum total of the ways in which its labor is divided into distinct tasks and then its coordination is achieved among these tasks" (p. 2). A synthesis of research provides the foundation for proposing five organizational configurations. Of the five organizational configurations, Mintzberg (1979) associated the professional bureaucracy with higher education. He states: "common in universities…rely on the skills and knowledge of their operating professionals to function" (Mintzberg, 1979, pp. 348-49).

Within each organizational configuration, Mintzberg identifies the key parts of the organization and describes how each part functions within that configuration. There are five key parts: operating core, strategic apex, middle line, technostructure and support staff. In the professional bureaucracy, the operating core carries "out the basic work of the organization" (p. 19). The operating core (most associated with the work of faculty) holds much power and control within the organization. Each operating professional has

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autonomy and "control over his own work" (p. 349). The professional in the operating core works "relatively independently from his colleagues" (p. 349). The standardization of skills makes it so that "operating professionals are trained to know what to expect from their colleagues" without having to collaborate or work closely with them (p. 349).

The professional bureaucracy has a "highly decentralized structure" (p. 357). Operating professionals (typically faculty) "seek collective control of the administrative decisions that affect them" (p. 358). This control extends to the middle line of the organization which contains the middle-line managers with formal authority. Operating professionals (typically faculty) control the middle-line by ensuring one of "their own" holds the position/s (p .358). This structure ensures that the operating core is functional while maintaining autonomy. In addition to the operating core, another prominent part of the organization is the support staff. Their focus is to serve the operating core. Support staff "do whatever routine work can be formalized" that supports the operating core professionals (p. 355).

When Mintzberg wrote <u>The Structuring of Organizations</u> in 1979, he identified the university as fitting the organizational structure of the professional bureaucracy. Yet he also hypothesized that the modern university would evolve to a hybrid model he terms the "professional bureau/adhocracy" (p. 370). This hybrid model combines the professional bureaucracy and adhocracy organizational structures into one.

The professional bureau/adhocracy has two separate structures within one organization: the operational adhocracy and the professional bureaucracy. Mintzberg (1979) describes: ". . . for every Operating Adhocracy, there is a corresponding Professional Bureaucracy, one that does similar work but with a narrower orientation . . . one (Operating Adhocracy) engages in divergent thinking aimed at innovation; the other

(Professional Bureaucracy) in convergent thinking aimed at perfection" (p. 436). Mintzberg (1979) describes the hybrid model below.

> Even hospitals and universities described…as closest to Professional Bureaucracy for their routine clinical and teaching work, are drawn to Adhocracy when they do innovative research. Their orientation to convergent, deductive thinking in their routine work precludes innovation. . . . So while their professionals are often able to work alone when they apply their standard knowledge and skills, they must typically join in organic multidisciplinary teams to create new knowledge and skills (p. 450).

The professional bureaucracy is still a major part of hospitals and universities; however, the push to innovate brings different professionals together into project teams. More recent research from Slaughter and Rhoades (2004) provides examples of multidisciplinary teams composed of faculty, attorneys and "other professionals" that are focused on converting faculty work into market-relevant products.

In this hybrid model, there are two operating cores; one is focused and specialized (professional bureaucracy) and the other is innovative (operating adhocracy). Mintzberg (1979) explains the work of the operating adhocracy core:

> …a key feature of the Operating Adhocracy is that its administrative and operating work tend to blend into a single effort . . . . Managers of the middle line and members of what in other organizations would be called support staff— typically a highly trained and important group in the Operating Adhocracy—may take their place right alongside the operating specialists on the project teams. And even when distinctions are made, a close rapport must develop between the administrative and operating levels, sometimes to the point where they are able to interchange their roles freely (p. 437).

A current example of this description can be seen in more recent research by Rhoades (2007) in which he studied the impact of incorporating instructional technologies in conventional classes. More specifically, he looked at, "the ways in which new technologies impact the production process and social relations of work" (p. 4). Rhoades (2007) studied two chemical engineering professors teaching different courses in the same academic field in the same university. Utilizing an observational case study methodology, Rhoades (2007) concluded that course production has a complex infrastructure. He describes:

> . . . producing a course involves a matrix of professional, technical and support personnel, as well as an instructional infrastructure involved in supporting and delivering instruction. It also refers to a different orientation to academic work that more prominently features the commercial character and potential of curricula as marketable intellectual property (pp. 1-2).

This case study provides evidence that university instruction has evolved. This new model moves away from the traditional model in which an expert is central to producing a class to a model in which the expert is part of a matrix of other specialists and experts involved in producing a class for both instruction and potential marketability.

CORE ELEMENTS AND ELABORATING ELEMENTS

The previous section described core work as it relates to organizational structure. This section provides theory which grounds how organizational core work is structured and described. Siggelkow (2002) utilizes the terms core elements and elaborating elements to describe organizational core work as he theorizes how an organization's core and elaborating elements can evolve over time. According to Siggelkow (2002), ". . . the number and identity of organizational core elements might not be constant over time.

Over any period of time, a firm might add a new core element, delete a core element, or replace a core element with a new one."

While changes to core elements are rare, changes and additions to elaborating elements are common. Siggelkow (2002) terms the process of adding new elements as "thickening":

> Over any period of time, any given core element might become further reinforced through the addition of elaborating elements. If a core element is not reinforced over a given period of time, the organization is said to be 'coasting' with respect to this core element. The process of 'thickening,' can also involve the replacement of former 'elaborating elements' with new ones (p. 145).

Academic capitalism (entrepreneurship)

An example within higher education that resembles Siggelkow's (2002) concept of "thickening" and adding elaborating elements can be found in Slaughter and Rhoades' (2004) theory of academic capitalism—a theory "which explains the process of college and university integration into the new economy" (p. 1). Slaughter and Rhoades (2004) define the new economy as "the new global knowledge or information society" (p. 1). In this new economy "knowledge is a critical raw material to be mined and extracted from any unprotected site; patented, copyrighted, trademarked, or held as a trade secret; then sold in the marketplace for profit" (p. 4).

While faculty has traditionally been the sole-producer of knowledge, there is evidence that contributions from faculty, students, administrators and managerial professionals comprise an "academic capitalist knowledge/learning regime" (Slaughter & Rhoades, 2004, p. 306). This group of "university actors" contributes, creates and researches new knowledge or learning methods which have the possibility of having

value in the private marketplace. Although these actors do not always work together; their "organized activity is directed toward opportunity structures created by the new economy" (Slaughter & Rhoades, 2004, p. 306). As these actors organize activities, they also "build expanded managerial capacity" to manage incoming revenue and further market and protect knowledge.

Academic capitalism has created new imperatives, organizational structures, and work. This work often has faculty, students, administrators and managerial professionals working toward similar goals. This example provides evidence that universities are experiencing a "thickening" behavior suggesting the addition of an elaborating element to university work.

Define university core work

The terms teaching, research, and service have been simultaneously used to describe the mission of the American research university and the work of faculty (Birnbaum, 1988; Rosser & Tabata, 2010). A primary concern with the terms for describing university mission is that they vary from institution to institution depending on the mission, type, and size of the institution (Rosser & Tabata, 2010). This study relies on the IPEDS work definitions because they are used by government and other public interest parties to assess and account for university work. The IPEDS definitions for teaching, research, and service are meant to organize work activities into institutional expense categories. Rhoads (1998) has suggested that these descriptors are limited and have possibly resulted in miscalculations of work. This section seeks to supplement the IPEDS definitions for teaching, research, and service by reviewing academic literature and public discussions related to university core work. There will also be some discussion

and recommendations for defining and accounting for teaching, research, and service work in the future.

Because institutional type is a factor for describing the scope and scale of teaching, research, and service, this study was limited to one institution: UT Austin. The discussion below will focus on defining research, teaching, and service for similar institutional types. UT Austin is described by the Carnegie Classification System as a public research university with a high undergraduate population and very high research activity (The Carnegie Foundation for the Advancement of Teaching, 2012). Some of the universities that match these criteria are: Indiana University, Michigan State University, Ohio State University, and Texas A&M University.

Research

Research is discussed first because it is considered the preferred emphasis of faculty work, especially at public research universities such as UT Austin (Blackburn & Lawrence, 1995). While teaching is considered a core part of faculty work, research is what determines faculty tenure and promotion within public research universities (Rosser & Tabatta, 2010). Historically, research was considered ancillary to teaching because it required too many resources (Rosser & Tabatta, 2010). Research gained prominence after WWII when the federal government provided funding to support military and medical research (Bok, 1982). Another research development emerged in the 80's with the Bayh-Dole act "which transferred the rights of ownership of federally funded inventions from the government to the recipient of the federal funds" (Rhoten & Powell, 2011, p. 321). Both movements provided new revenue streams for universities. The former foregrounded the federal government's research interests and integrated applied research

to university missions. The latter foregrounded the external market and made knowledge a commodity to be sold (Slaughter & Rhoades, 2004)

Gibbons et al. (1994) discusses the evolution of university research by defining two modes of knowledge production. Within these modes, Gibbons et al. (1994) uncover the growing complexity of knowledge production. Mode I research represents the tradition of single discipline, Newtonian, dis-interested scientific research. In this mode, academic peers are the primary audience. Mode II research is more complex with an interdisciplinary production of knowledge, and it is applicable outside the academic setting to government, business, and not-for-profit think tanks (Gibbons et al., 1994). Mode II knowledge production moves past the traditional/purist view to a more applied and inclusive view of research.

While the descriptions above represent an evolving research landscape, the IPEDS system defines research according to how it is funded rather than the work outcomes and activities associated with it:

> A functional expense category that includes expenses for activities specifically organized to produce research outcomes and commissioned by an agency either external to the institution or separately budgeted by an organizational unit within the institution. . . . Also included are information technology expenses related to research activities . . . (The Integrated Postsecondary Education Data System-Glossary, 2012).

Based on the review of literature on what constitutes university research, the following definitions were developed for this study: Research *work* is defined as that which results in new knowledge either theoretical or applied. Research *outcomes* include publishing findings in peer-reviewed academic journals, applying for and receiving patents and trademarks for new work, or selling new knowledge on the open market

(Renault, 2006; Slaughter & Rhoades, 2004; Coaldrake & Stedman, 1999; J. Altshuler J & D. Altshuler, 2004). This study utilizes these research outcomes to build a survey for analyzing core university work.

Teaching/instruction

The terms teaching and instruction will be used interchangeably to discuss both the mission and work of teaching within large public research universities. American higher education institutions were first established to "train men to enter the ministry, teaching, and the practices of law and medicine" (Kerr, 2001, p. 202). There are two main movements that shaped the teaching mission of public research universities. First, the Morrill Act of 1862 offered federal land to each state for the purpose of teaching agriculture and the mechanical arts (Geiger, 1986, p. 5). Many public universities, especially in the middle and far west of the country, were established as a result of the Morrill Act (Bok, 1982). The second movement was post WWII with the G.I. Bill which provided veterans federal support for a college education (Rhotten & Powell, 2011). Half the population of students that entered college under the G.I. Bill was first generation college students (Kerr, 2001). Both movements opened access to higher education to a different population of students.

Currently the mission of teaching at public universities is at the center of much criticism and debate over rising tuition, state budget cuts, and increased enrollments (Rizzo, 2006). Public universities are pressured to teach larger numbers of students as state funding decline. Coaldrake and Stedman (1999), describe the demands placed upon university faculty as follows:

Academics are being asked to meet the needs of more diverse student groups, to teach at more flexible times and locations, to master the use of information

technology in teaching, to design curricula around learning outcomes and across disciplines, to teach in teams, to subject their teaching to evaluation and develop and implement improvements, to monitor and respond to the evaluations made by students and graduates, to improve assessment and feedback, to meet employer needs, and to understand and use new theories of student learning (pp. 13-14).

Groccia's (2012) model for understanding university teaching and learning breaks down the faculty work Coaldrake and Stedman (1999) describe above. His model uses seven interrelated variables to describe a more holistic view of teaching that takes into account less visible aspects of teaching: (1) learning outcomes, (2) instructional processes, (3) course content, (4) teacher and (5) student characteristics, (6) learning process, and (7) learning context. Groccia (2012) states that faculty typically focus on one to two of the seven variables in their teaching. The remaining variables are produced by other non-faculty employees, typically who work in an institutional learning center (Groccia, 2012).

Similar to Mode I and Mode II research (Gibbons et al., 1994), Coaldrake and Stedman (1999) describe the evolution of teaching work to include more complex learning environments that have diverse students and interdisciplinary curricula. Groccia's (2012) teaching model provides a structure to describe and account for teaching work. Rhoades (2007) describes a further evolution of teaching work that moves past the traditional classroom to one that produces teaching at a mass level for commercial gain. Rhoades (2007) terms this evolved teaching "Mode III instruction":

Mode III refers partly to a pattern in which producing a course involves a matrix of professional, technical, and support personnel, as well as an institutional framework involved in supporting and delivering instruction. It also refers to a different orientation to academic work that more prominently features the

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commercial character and potential of curricula as a marketable intellectual property (pp. 1-2).

The evolution of teaching work has moved from the single professor teaching a course to teams of specialists working to accommodate new instructional needs for new populations of students and changing accountability factors set forth by state and federal entities.

On the other hand, the IPEDS system defines university instruction as it defines university research—in financial terms:

A functional expense category that includes expenses of the colleges, schools, departments, and other instructional divisions of the institution and expenses for departmental research and public service that are not separately budgeted. Includes general academic instruction, occupational and vocational instruction, community education, preparatory and adult basic education, and regular, special, and extension sessions. Also includes expenses for both credit and non-credit activities (IPEDS, 2012).

Although this expense-based definition of university instruction is broad, it does not account for the process of teaching such as developing curriculum and assessing instruction.

Based on our review of the literature on teaching at large public research universities, the following definitions were developed for this study: Teaching *work* is defined as the instruction of a class, workshop, or program that has stated learning objectives. University teaching *outcomes* include: curriculum development, instruction, instructional assessment and reporting, and selling instruction and curriculum on the external market.

Public service

Public service is the most inconsistent of the three university missions. The public service mission has its roots in the Morrill Act of 1862 which expanded the university mission to include public interests. Bok (1982) describes:

> As time went on, land-grant colleges and universities, especially in the Midwest and Far West, provided services that extended far beyond professional and vocational education. Extension services and field stations supplied farmers with information on the newest agricultural techniques. Law teachers helped to draft new commercial codes, while economists advised state officials on labor and social legislation. Special programs during the evening hours offered instruction to hundreds of thousands of adults, helping them to explore intellectual interests to prepare themselves for better careers (p. 62).

Today public service can represent various interests. One view positions the university's public service mission as an economic benefit to society which is calculated through the social rate of return; the contribution of education to national income growth; and the economic impact of colleges and universities to local, state, national, and global economies (McMahon, 2009). The public service mission can also be described by "public good qualities" which can include:

> . . . reduced crime rates, enhanced individual and community health, consumer efficacy, increased voluntary community service, increased quality of civic life and political efficacy, social cohesion and greater appreciation of diversity, enhanced cultural and scientific progress, and a greater ability to adapt and use technology (Lewis & Hearn, 2003, p. 4).

Public service is also associated with some of the applied outcomes from research and teaching missions such as medical services through hospitals; information

management through libraries; opened access to underrepresented populations; educating civil servants, teachers, and practitioners of the "helping professions;" and conducting research on problems of national need (Calahon, 2011).

IPEDS, on the other hand, defines public service as an expense rather than an economic gain which benefits the community outside the university. Thus, public service is:

> A functional expense category that includes expenses for activities established primarily to provide noninstructional services beneficial to individuals and groups external to the institution. Examples are conferences, institutes, general advisory service, reference bureaus, and similar services provided to particular sectors of the community.

From a faculty work perspective, service has different meanings. Faculty view service as a contribution to the university or the profession. Such activities include: participating in faculty hiring committees, policy and curriculum committees, faculty promotion and tenure committees, senate /council work, guest speaking, and teaching in other areas of campus or other state university systems (Rosser & Tabata, 2010).

Based on our review of the literature on universities and public service, the following definitions were developed for this study: Public service *work* is defined as noninstructional services beneficial to individuals and groups external to the university. Public service *outcomes* focus on opening access to the university to underrepresented communities; medical services to the community; preserving, storing, or disseminating information; preserving and promoting the arts; and stimulating participation and educating the public in the democratic process.

SUMMARY

This review explored theoretical, conceptual and contextual frameworks used to guide and inform the study. This literature builds the case for studying non-faculty professionals and begins to build a framework for thinking about university core work.

Miner and Estler (1985) show how jobs evolve within universities. Kane (2007), Rhoades (1998), and Slaughter and Rhoades (2004) demonstrate that non-faculty professionals are performing work that was traditionally performed by faculty. Rhoades' work (2007) suggests that service and outreach can also be considered core work.

Mintzberg's (1979) hybrid professional bureau/adhocracy organization theory provides a view of higher education work structures that matches observer descriptions of how university work is currently being performed. Sigglekow's (2002) terms— "core element," "elaborating element," and "thickening"— offers theory for describing core work. Rhoades (2007) and Slaughter and Rhoades (2004) provide examples of university work that matches the theoretical organizational models.

The final section explored the triad of teaching, research, and public service and its evolved landscape. The analysis showed how each area has expanded in scope and how the IPEDS definitions are insufficient for describing this work. Updated definitions, which focus on outcomes, were recommended and used to inform the survey tool. The next section will build on the literature review with a survey tool that can account for teaching, research, and public service work.

CHAPTER3: METHODOLOGY

Two analyses were administered to best understand the "other professional" population. The first utilized workforce analysis which pulled job incumbent information from the University of Texas Human Resource Management System. The second utilized a survey instrument to ask job incumbents to self-report their work activities and outcomes related to the dimensions of teaching, research, and public service.

SAMPLE

At the time of the survey, there were $N=$ 4946 full-time and part-time "other professional" employees. The whole population was utilized for the workforce analysis portion of the study. For the survey, there were rules established to both protect the anonymity of respondents and to improve consistency in data analysis. First, the researcher decided to survey only full-time job incumbents. The study focused on full-time employees because it ensured consistency in percentages related to the time "other professionals" spent on teaching, research, and public service work activities. Second, to ensure anonymity of responses, the researcher chose to survey only individuals who held a job title that had more than four job incumbents.

From the $N=$4946, there were 870 part-time other professional employees The researcher chose to keep 179 part-time employees in the study because they had multiple jobs within the university that equated to full-time. There were 205 full-time employees in job titles that had less than four incumbents. There were also 25 employees who were not included in the study because they did not have an email listed. These filters produced an n value of 4025 employees.

PROCEDURE

The workforce data was acquired through a formal request submitted to the Human Resource Services Workforce Planning unit at UT Austin in the spring of 2012. Before the formal request was made, the researcher met with the Director for Workforce Planning to understand better what information was essential to include in the data request. The formal request asked for the following information: employee unique identifier (UTEID); IPEDS code; name; email address; job title; job code; education level; whether the individual was benefits eligible; full time or part time appointment; the title of the vice president the individual reported to; and the department name the individual worked for. In addition to these initial requests and through additional discussion with the Workforce Planning Director, the researcher asked for data which would identify part-time employees who also had faculty appointments.

The sample email addresses for the survey were pulled from the workforce data. The parameters established in the previous section were used to select the portion of the population to survey. All individuals who met the parameters were surveyed.

Survey communication included an invitation email to the population sample. The invitation email can be seen in Appendix B. The invitation introduced the researcher, described the purpose of the survey, described the incentive for survey completion, and included a link to the survey itself. The incentive for survey response was entry into a drawing for a $250 Amazon.com gift card.

INSTRUMENT

This section provides an overview of the survey instrument. The survey and the consent form can be found in Appendixes C and D respectively. The survey had a total of fifty five questions, 13 of which were required of all respondents and four of which were optional. The remaining 38 questions utilized branch logic, a survey technique which

allows the researcher to direct respondents to different places in the survey depending upon a response. The strategy of branching, which is not visible to the participant, was chosen to focus respondents on only those questions related to their current job duties and to reduce the number of irrelevant questions the individual needed to respond to.

The survey was broken up into six sections. The first section asked for details about the individual's job, namely job title, job purpose and whether the individual had dual-titles. These questions were asked of all survey participants.

The second section asked questions related to teaching work. The teaching questions were guided by the teaching definition established in Chapter 2, that is, instruction of a class, workshop, or program that has stated learning objectives. University teaching outcomes were described as: curriculum development, instruction, instructional assessment and reporting, and selling instruction and curriculum on the external market. There were 18 possible questions in the teaching section, four of which were asked of all survey participants. These four questions are considered "level-one questions" and the answers to these primary questions either opened up new questions or skipped the participant to another level-one question. The four questions were: whether the individual performed teaching work; whether s/he assisted in the design of college-credit courses; whether s/he had been a chair of a graduate research committee; and whether s/he had been a member of a graduate research committee. The remaining questions asked about the amount of time individuals spent performing teaching work and what specific research activities and outcomes they produced. An additional question asked whether anyone was conducting research on the individual's teaching work.

Section 3 asked questions related to research work. These questions were guided by the definition of research work established in Chapter 2: that which results in new knowledge either theoretical or applied. Research outcomes included publishing findings

in peer-reviewed academic journals; applying for and receiving patents and trademarks for new work; or selling new knowledge on the open market. There were 12 questions in the research section, four of which were level-one questions asked of all participants. The four level-one questions asked whether the individual performed research work; whether s/he published in a peer-reviewed journal; whether s/he submitted grant proposals; and whether s/he collaborated with industry to push research to market. The remaining questions asked about the amount of time individuals spend performing research work and which research activities and outcomes they produce.

Section 4 asked questions related to public service work. Public service was defined as non-instructional services beneficial to individuals and groups external to the university. Work outcomes were focused on medical services to the community; preserving, storing, or disseminating information; preserving and promoting the arts; and stimulating participation in and educating the public on the democratic process. There were 12 questions asked in the public service section. The question which asked whether the individual performed public service work was the only level-one question in this section. The remaining questions asked about the amount of time individuals spend performing public service work and which research activities and outcomes they produce. Additional questions asked whether anyone was conducting research on public service work activities.

Section 5 asked questions relating to the individual's career plans. There were five questions in this section. The question asking: "how likely are you to be performing the same work in five years?" was the only level-one question in this section. The remaining four questions asked about the type of work the respondent was aspiring to and whether s/he aspired to be a faculty member.

Section 6 asked four, open-ended questions, which were available to all survey participants. These questions gave participants the opportunity to add any additional insights or comments on teaching, research, or public service as well as anything else that was not covered in the survey related to "other professional" work.

DATA ANALYSIS

The study performed two analyses: the workforce data analysis and the survey data analysis. Both analyses utilized descriptive statistics to find frequencies and percentages. For the workforce analysis, population data were used to find frequencies and percentages by full-time/part-time employment status, job title, department, and educational levels.

The survey analysis also calculated frequencies and percentages. Cross tabulation was utilized to compare multiple question responses and to view data from a multi-dimensional perspective. When relevant, coding was utilized to categorize and reclassify qualitative responses. For example, multiple survey questions asked whether anyone was conducting research on teaching or public service activities. If the respondent answered yes, s/he was asked to describe the type of research being conducted. These responses were categorized and calculated as frequencies to show the different types of research conducted as teaching or public service work. Also, on occasion, qualitative responses were used to supplement quantitative information as a means to provide deeper insights.

"Other professional" employees held 274 job titles at UT Austin in March of 2012 when the population data was pulled. The best way to make sense of these job titles was to categorize them based on type of university work. The researcher established a coding system while reviewing the data and let the codes emerge from the data as Miles and Huberman (1994) recommend. Fourteen codes and definitions emerged: Research,

Administrative, Coordinator, Information Technology, Student Administrator, Service Teaching, Other, Preservation, Medical, Project Management, Development, Athletics, Grants, and Writing. Codes with definitions can be found in Appendix E. Once the codes were established, the researcher assigned a code to each job title. The researcher also read the description of each job title in the University Pay Plan in order to assign the code accurately. If the researcher was still unsure about coding, she considered which departments employees reported to, which was helpful, because the mission/purpose statements of the department helped clarify confusing job purpose answers for some respondents.

Miles and Huberman (1994) suggest establishing a process to check coding reliability. Codes were checked using Standard Occupational Classification and Coding Structure (SOC Code) established by the U.S. Bureau of Labor Statistics (2010). In September of 2012, UT Austin completed a project to add SOC codes to all job titles. The researcher acquired the coding from the Workforce Planning director. The SOC codes were then compared to the researcher's emerged codes. Each research code was matched with the corresponding SOC codes. For example, the assigned code and definition for "Research" was associated with SOC codes 17-0000 Architecture and Engineering Occupations; 19-0000 Life Physical and Social Science Applications; 45-0000 Farming, Fishing, and Forestry Occupations; and 39-0000 Personal Care and Service Occupations. Emerged codes and SOC code relation can also be found in Appendix E.

Once the coding relationships were established, the researcher went back to the original coding and compared that to the SOC codes. If there was a discrepancy, the researcher would re-check the job title's description in the University Pay Plan and also check which departments the job titles typically reported to. This process resulted in 52 corrections.

SUMMARY

The methodological approach analyzed both the population workforce data and the sampled survey data to build a holistic picture of the "other professional" population. Data was analyzed first by categorizing job titles into larger segments. The workforce population data was analyzed by finding frequencies and percentages by each job title category. Finally, the survey data was analyzed for frequencies and percentages of responses both holistically and by job title category. The next two chapters will present the data analysis for the workforce data and the survey data.

CHAPTER4: WORKFORCE ANALYSIS

This analysis has two main sections. First the population analysis describes where "other professionals" work and what they do. The second section compares the population to the study sample, examining overrepresented and underrepresented areas as well as study response rates.

POPULATION ANALYSIS

At the time of the survey, there were $N=4946$ full-time and part-time "other professional" employees at UT Austin. These employees represented $N=274$ different job titles and $N=252$ different departments. The study surveyed full-time employees in job titles with four or more job incumbents. This filter produced an n value of 4025 employees. These employees represented $n=145$ different job titles and $n=172$ different departments. Table 4.1 provides an overview of population and sample variables with their associated values. The population job incumbents are broken down between full-time and part-time. The part-time category is broken down further to explain some anomalies associated with part-time employees. There were two categories of part-time employees which were included in the study; those who had a dual "faculty/other professional" appointment and those who had multiple part-time appointments which equated to full-time.

Variables	N Values
N Job Incumbents	4946
Full-time job incumbents	4077
Part-time job incumbents	869
Only one part-time appointment	696
Part-time with an additional faculty appointment	52
Multiple part-time appointments that equal full-time	121
N Job Title	277
N Departments	252
n Job Incumbents (full-time with more than 4 incumbents)	4025
n Job Titles	145
n Departments	172

Table 4.1:   Population (N) and Sample (n) Variables with Values

Other Professionals by Job Titles

Table 4.2 (see Appendix F) provides a detailed view of the "other professional" population and job titles with four or more job incumbents at UT Austin in March 2012. Postdoctoral fellows had the highest concentration of job incumbents in a single title. As mentioned in the previous chapter, postdoctoral fellows were eliminated from both the workforce and survey analyses, as the "post doc" is considered a preparatory job for a future faculty position; it is also considered a temporary job (Committee on Science, Engineering, and Public Policy, 2000).

There were 115 job titles not included in the study because they had less than four job incumbents. Table 4.3 (see Appendix G) lists these job titles by the highest number of incumbents. There were additional job titles eliminated from the study because of part-time positions. Combined, Tables 4.2 and 4.3 represent all "other professional" employees at UT Austin in March of 2012.

A more meaningful view of work by job title is represented in Figure 4.1. As mentioned in Chapter 3, codes were developed by the researcher to categorize the job titles into broad areas of work. The categories that emerged were: Research, Administrative, Coordinator/Project Management, Student Administrator, Information Technology, Service Teaching, Communication and Media Writing, Other, Medical, Preservation, Development, Athletics, and Grants. The definitions for these codes can be found in Appendix D.
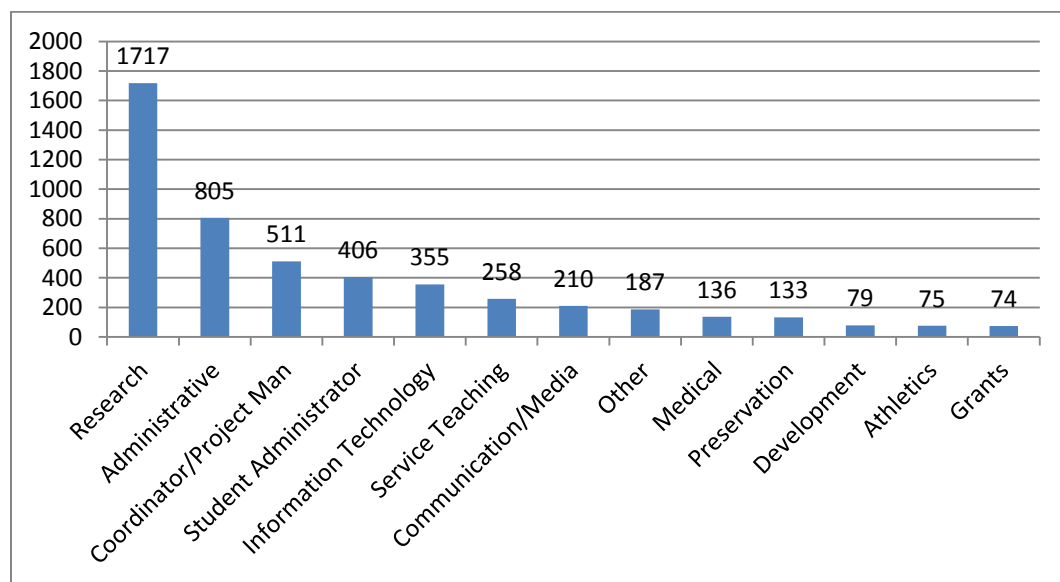
Figure 4.1: Number of Job Incumbents by Job Category

According to Figure 4.1, "Research" work accounted for the highest numbers of "other professional" work at 1717 or 35%. Research work was defined as work directed at producing research. There were 23 job titles included in the research category. Postdoctoral fellows (N=496) were the highest frequency job title in the Research category. With postdoctoral fellows removed, the Research category still accounted for the highest percentage of work at 25%.

Administrative jobs had the second highest concentration of job incumbents, accounting for 16% of "other professional" job incumbents. Administrative jobs were defined as jobs which support the business and operations of the university. There were 76 different job titles included in the Administrative category. Examples of administrative job titles were: Accountant, Admin Manager, Conference Coord, Dept Buyer, and HR Services Coord.

The third highest concentration of "other professional" job incumbents was in Coordinator/Project Manager jobs which accounted for 10% of "other professional" jobs at UT Austin. Coordinator/Project Manager jobs were defined as jobs which had coordinator or project manager in the title and did not have clear job descriptions in the UT Pay Plan. There were seven different job titles included in the Coordinator/Project Manager category.

The remaining categories represented 39% of "other professional" job incumbents. These job categories varied between Student Administrators, Information Technology, Development/Fund Raising jobs and others. The job title analysis looked at the 274 "other professional" job titles and their incumbents. When clustered, Research and Administrative job titles had the highest concentration of "other professional" job incumbents. The Coordinator/Project manager area of work was interesting because of the limited information in the UT pay plan; also it ranked third highest in job incumbent concentration.

Other professionals by organizational division

The view of "other professionals" by department provides a broader perspective of work which mirrors the job title analysis. "Other professional" employees at UT Austin worked in 252 different departments in March 2012. Table 4.4 provides an

overview of the departments which had the highest concentrations of job incumbents. Because of anomalies associated with part-time employees, 170 job incumbents were taken out of the data; therefore, the number of job incumbents in Table 4.4 does not match with the population numbers. Table 4.4 is limited to the departments which held at least 1% of "other professional" employees at UT Austin. These top 30 departments accounted for 48% of the "other professional" population.

Rank	Departments	Job Incumbents	N	% of 4776
1	Applied Research Labs		314	7%
2	Intercollegiate Athlet		150	3%
3	University Charter Sch		145	3%
4	IPS1		116	2%
5	Business School		114	2%
6	CIO/ITS COO Office		109	2%
7	Economic Geology Bureau		109	2%
8	University Libraries		91	2%
9	International Office		85	2%
10	Development Office		73	2%
11	Natural Sciences		72	1%
12	Nursing Research Ctr		66	1%
13	Tx Advanced Computing		64	1%
14	Pharmacy College		61	1%
15	Computational Eng/Sci		60	1%
16	Liberal Arts		58	1%
17	University Health Services		58	1%
18	Chemistry/Biochemistry		57	1%
19	Reading/Language Arts		57	1%
20	Social Work Research		55	1%
21	Cellular/Molecular Bio		55	1%
22	Engineering		52	1%
23	McDonald Observatory		49	1%
24	Law		48	1%
25	Public Affairs School		48	1%
26	Harry Ransom Center		46	1%
27	Music School		44	1%
28	Dana Center		44	1%
29	Accounting Office		43	1%
30	Counseling and Mental Health Ctr		42	1%
Total			**2385**	**48%**

Table 4.4:   Top 30 Departments with Highest Frequency of Job Incumbents

Data do not include 170 duplicates

As with the job titles, the most meaningful way to view the 252 departments was to categorize them. As mentioned in Chapter 3, departments were categorized by the researcher into organizational divisions based on the type of work the department performed. Six organizational divisions were established: College, Research, Service, Administrative, Student-Focused, and Other.

Figure 4.2 shows the concentration of incumbents by each organizational division. Colleges had the highest concentration of "other professional" incumbents. Colleges were defined as academic units that teach and research in specific areas of study. "Research," defined as departments that focus solely on producing research, had the second highest concentration of job incumbents. "Administrative" was third and was defined as departments that provide support functions to the university and do not directly produce academic work. "Service," defined as providing services that extend beyond the university, were fourth. Finally, "Student-Focused" was defined as providing services to students.

The department view emphasizes that "other professionals" work in departments focused on a variety of work, with 15% of "other professional" employees who worked in Administrative departments and 85% who worked in non-Administrative departments.
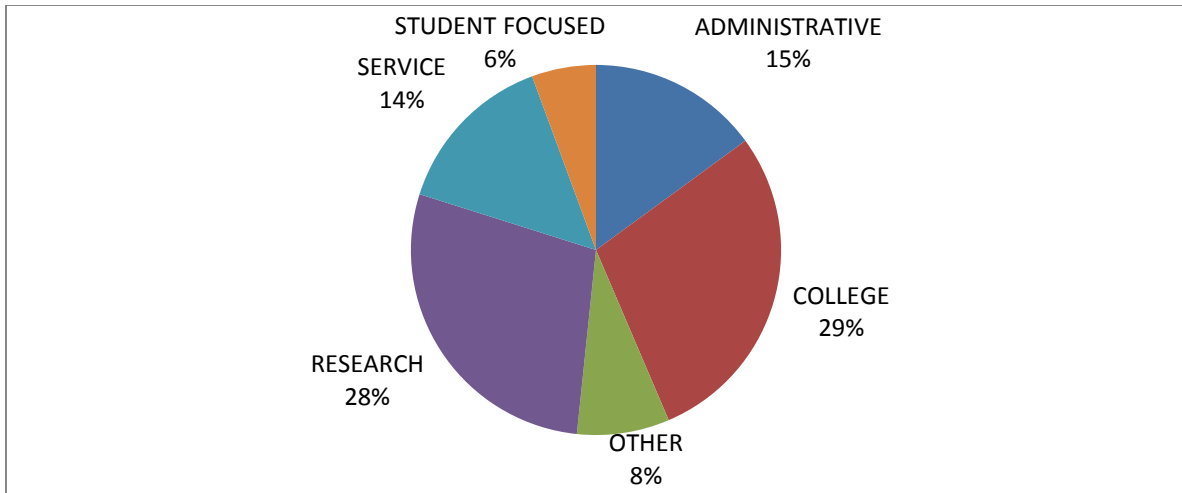
Figure 4.2:   Organizational Division by Number of "Other Professional" Job Incumbents

Data does not include 170 duplicates

Job title and department summary

The job title and department analyses describe work from two perspectives. The job titles describe a single employee's work, while the departments describe the work of the organization. Because this study is seeking to understand whether "other professional" employees at UT Austin performed teaching, research, or public service work, this section will analyze the job title and department data further.

Table 4.5 combines the job title and department categories to show how each job title category is distributed by organizational division. The table concentrates on the six job title categories with the highest number of job incumbents. In addition, the preservation category was included (ranked 9th) because of its close link to service work. Combined, these job title categories accounted for 84% of "other professional" work at

UT Austin. The remaining job title categories were collapsed into the "other" job title category which accounted for the remaining 16% of "other professional" work.

	Job Title Categories							
Organizational Division	Research (35%)	Administrative (16%)	Coord/PM (10%)	Student Admin (8%)	Info Tech (7%)	Serv Teach (5%)	Preservation (3%)	Other (16%)
College (29%)	32%	27%	42%	46%	15%	8%	4%	27%
Research (28%)	59%	11%	17%	1%	17%	0%	22%	13%
Administrative (15%)	2%	35%	13%	12%	46%	1%	1%	17%
Service (14%)	4%	9%	16%	20%	4%	71%	72%	15%
Other (8%)	3%	12%	7%	7%	7%	20%	1%	14%
Student (6%)	0%	7%	5%	14%	9%	0%	0%	13%

Table 4.5:   Prevalence of Job Title Categories by Organizational Division

Table 4.5 emphasizes that the majority of "other professional" employees at UT Austin had jobs and worked in departments focused on producing research (Research Centers and Colleges). With postdoctoral fellows removed from the data, research work still accounted for the majority of work at 25%. The table also showed that college departments employed the majority of Coordinators/Project Managers and Student Administrators. Colleges also employed almost as many Administrator job titles as Administrative departments. Finally, the majority of Service job titles, which accounted for 8% of "other professional" work, were found in service focused departments.

This analysis confirms that "other professional" employees are producing a variety of work that is not limited to administrative work. Rather, "other professionals"

appear to be assisting in the production of research and service-oriented work. A smaller group appears to be directly providing services and programming to students.

Educational attainment levels of "other professionals"

This section briefly reviews the educational attainment levels of "other professional" employees. Table 4.6 sorts the educational attainment levels by highest frequency. The table provides two views: one that is inclusive of postdoctoral fellows and one with the 496 postdoctoral fellows removed. Both views show that over 80% of "other professional" employees have at least a bachelor's degree. With postdoctoral fellows removed, 44% of "other professional" employees have an advanced degree and 14% have a doctoral degree.

Degree	Incumbent w/ Postdoc	% w/Postdoc	w/o Postdoc	% w/o Postdoc
BACHELORS	1710	35%	1690	34%
MASTERS	1398	28%	1376	28%
DOCTORAL	1070	22%	710	14%
UNKNOWN	336	7%	280	6%
HIGH SCHOOL	280	6%	244	5%
ASSOCIATES DEGREE	53	1%	53	1%
PROFESSIONAL DEGREE	52	1%	52	1%
CERTIFICATE	23	0%	23	0%
MEDICAL DEGREE	21	0%	19	0%
LESS THAN HIGH SCH	3	0%	3	0%
Total	4946		4450	

Table 4.6:   Educational Attainment Levels of "Other Professionals" at UT Austin

Unlike the job titles and departments, educational attainment levels are self-reported by the individual employee. At UT Austin, employees update certain pieces of their biographical information themselves. In the online biographical system, the employee selects the highest level of education they have received. The data in Table 4.6 appear problematic since the removal of postdoctoral fellows had an effect on the

masters, bachelors, and high school attainment levels. This suggests that a certain number of postdoctoral fellows self-reported their highest education level as masters, bachelors, or high school. This is an issue because postdoctoral fellow positions typically require a Ph.D. or doctoral equivalent (Committee on Science, Engineering, and Public Policy, 2000). While the data may be problematic, the trends show that a large population (43% without postdoctoral fellow's included) of "other professional" employees have advanced degrees.

Duplicates in study

This section will address the 170 individuals included in the study who have multiple appointments at the university. These 170 individuals are divided into two sections. The first group of 50 individuals have both an "other professional" job title and a faculty job title. The remaining 120 individuals have the same job title, but report to multiple departments. Both these groups affect the population analysis because they report out as duplicate part-time jobs even though they are considered full-time employees by the university.

There were 50 dual "faculty/other professional" employees included in the study. These individuals held both a faculty job title and an "other professional" job title. Thirty-two of these individuals had more than a 50% faculty appointment. Fourteen of the 32 had a 50/50 distribution, while seven had a full-time faculty appointment with an additional 25% "other professional" appointment. The remaining 18 individuals had less than a 50% faculty appointment.

There were 120 individuals who were considered full-time employees, but had multiple job appointments. Of the 120 individuals 118 had the same job title for both appointments, but they reported to two different departments. The time appointed to the

two departments varied between individuals. There were 33 individuals who had an even 50/50 split in their appointments. The remaining had various percentages of distribution. There were also two employees who had two different job titles and worked for two different departments. Because of the inconsistency in percentages of job incumbent time, the analysis of departments below does not include the 170 duplicate appointments.

Since most of the 120 part-time, non-faculty employees had the same job title, these individuals were counted once for the job title analysis, and the duplicative appointment was removed from the data set. The 50 individuals who also had faculty appointments were also counted in the job title analysis. The department analysis did not include part-time anomalies because all 170 part-time employees reported to multiple departments. The elimination of the 170 individuals had minimal effect on the department data analysis. There was no effect percentage-wise on the Research, Service and Other categories.

SURVEY RESPONSE RATES

This section addresses the survey response rates and how the rates compare to the population data. The survey received a 26% (f=1036) response rate from surveying n=4025 participants and 21% of the population (N=4946). This rate is considered a typical response for an online survey (Manfreda et al., 2008). The survey data was analyzed using two views: the job incumbent view and the job title view. To address the two views, the overall response rate and the response rates by job title were calculated. An additional view shows the respondents by percentage of responses by job category. This view informs how representative each job category response aligned with the sample. There are two tables below which will show these two views.

Table 4.1, shown earlier in the chapter, provided an overview of population and sample study variables. The *n* values represented 81% of the "other professional" population and 52% of the "other professional" job titles. A total of 129 job titles were not surveyed; 14 job titles were eliminated because they were only held by part-time employees; and 115 job titles were eliminated because less than four incumbents held that title.

The survey received a 27% overall response rate. The workforce analysis showed that the "other professional" population tended to cluster around certain job titles and organizational departments. Table 4.7 reflects response rates by the 13 job title categories established in Chapter 3. In addition to categorizing job titles, the researcher also made a decision to exclude postdoctoral fellows from the study because this job is considered a temporary position for the purpose of training future faculty (Committee on Science, Engineering, and Public Policy, 2000). Table 4.7 does not include the 57 postdoctoral fellows who completed the survey.

There were 81 survey respondents who selected "my job title is not listed" and five respondents who did not answer the question. Because the survey analysis will mainly present results by Job title category, the researcher decided to assign job titles to these responses. The researcher utilized the section where the respondent described his/her job to assign a job title to the response. As with the job title categorization, the researcher utilized UT Austin Pay Plan job descriptions to assign job titles to individual responses. Forty-one of the 81 responses were assigned a job title. The remaining 40 responses were not assigned a job title because the job descriptions provided by the

respondent were not sufficient to make an accurate determination. All five of the responses where the job title question was skipped were assigned a job title. To check job title assignments, the researcher asked a Human Resource professional from UT Austin to review the job title assignments for accuracy.

Job Category	Response w/o Postdocs	%	n incumbent	%	Response Rate
Administrative	217	22%	687	19%	32%
Research	211	22%	993	28%	21%
Student Administrator	115	12%	361	10%	32%
Coordinator	130	13%	465	13%	28%
Information Tech	82	8%	302	8%	27%
Communications/Media	35	4%	132	4%	27%
Preservation	40	4%	112	3%	36%
Grants	25	3%	63	2%	40%
Development	22	2%	75	2%	29%
Service Teaching	39	4%	214	6%	18%
Medical	12	1%	53	1%	23%
Other	5	1%	39	1%	13%
Athletics	6	1%	66	2%	9%
My title is not listed selected	40	4%			
Total	**979**		**3562**		**27%**

Table 4.7:   Survey Response Rates by Job Title Category

SUMMARY

This workforce analysis provided a view of the "other professional" population at UT Austin. It showed that this population is involved in producing research, serving students and providing services external to the university. The research question for this study asks whether the "other professional" population is producing teaching, research and/or public service work, which typically has been associated with faculty work. The population analysis suggests that research and public service work was being performed by the "other professional" population at UT Austin in March of 2012. The teaching work seemed to be focused on teaching others external to the university and more aligned

with public service work. The survey analysis will further describe the work activities of "other professional" employees. It will also answer more directly whether "other professional" employees at UT Austin were performing work traditionally associated with faculty work.

CHAPTER5: SURVEYANALYSIS

This study was focused on describing what work traditionally associated with faculty work was being performed by "other professional" employees at UT Austin. The Goldwater report (Greene et al., 2010) and others were concerned that the "other professional" category of employees at universities was an overly large administrative expense. Chapter 4, which reviewed population data of the "other professional" population at UT Austin in March of 2012, suggested that many of these employees worked in a variety of non-administrative departments and were in job titles that spanned research, administrative, student administration, teaching, and preservation among others. It was also determined in Chapter 4 that postdoctoral fellows were problematic for the study because their positions are known to be a temporary position and focused at developing future faculty. Postdoctoral fellows had the highest frequency job titles accounting for 10% of the entire "other professional" population. For this reason, the 57 postdoctoral fellows who responded to the survey were removed from the analysis. There were 979 non-postdoctoral fellow "other professional" employees who completed the survey.

The survey analysis will address both quantitative and qualitative responses and will be presented in five sections. Overall survey data, which examines responses from all survey participants, will be addressed first. The second section will explore faculty-like work performed by other professionals in the context of publications, committee work, curriculum design, industry collaboration, and grants applications. The third, fourth, and fifth sections will take a closer look at three core faculty work areas of teaching, research and public service.

RESULTS: OVERALL

This section addresses the answers to the three main questions in the survey: (1) Think of the job you are currently in. Do you perform work that is considered teaching; (2) …Do you perform work that is considered or that contributes to scholarly research; and (3)… Do you perform work that directly contributes to increasing educational opportunities to individuals? There were 759 (78%) respondents who answered "yes" to at least one of the three questions related to teaching, research or public service. Figure 5.1 provides an overview of those who answered "yes" to each of these three main questions. This figure shows that at least 40% of survey respondents indicated they perform teaching, research or public service work. Looking at the combination of responses, there were 12% (*n=112)* who answered "yes" to all three questions and 22% (*n=220*) who answered "no" to all three questions.
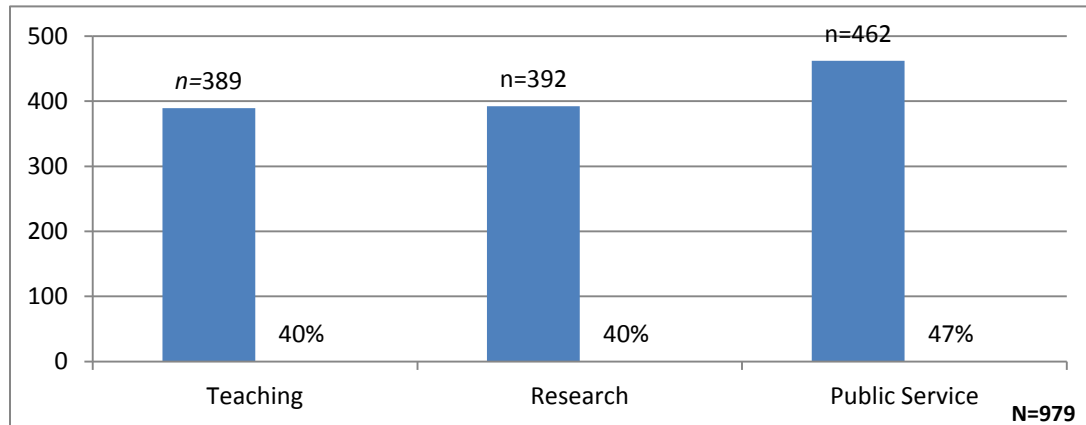
Figure 5.1: Distribution of "Yes" Answers to Teaching, Research, Public Service

All who answered "yes" to each of the three core work questions were asked to report what percentage of their job was devoted to teaching, research or public service. Figure 5.2 shows the distribution of responses related to time spent performing teaching,

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research or public service work. The chart shows that the majority of the 40% (*n=392*) who indicated they performed research work, either had jobs almost entirely focused on research (62%, *n=243*) or had jobs with 25% or less focused on research (38%, *n=149*). The majority of teaching work accounted for 25% or less of peoples' work. Public service work showed some concentration in the 25% or less or more than 80% areas. These two tables provided a high level overview of the type of work "other professional" employees at UT Austin performed. The next section will break down each of the three categories to best understand "other professional" research, teaching or public service work.
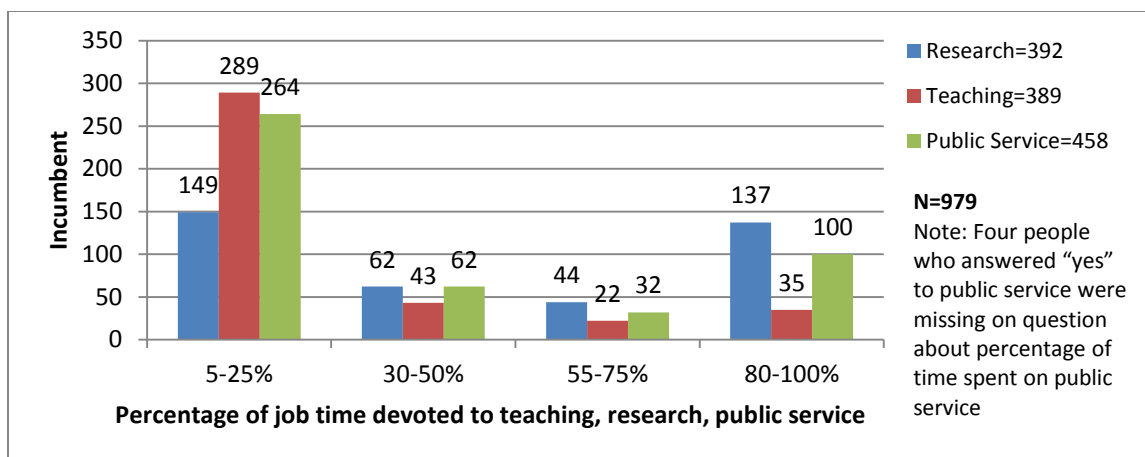
Figure 5.2:   Job Time Devoted to Teaching, Research, Public Service

RESULTS: FACULTY-LIKE WORK

In addition to the three main questions related to teaching, research and public service, there were three areas of work of interest to the study because they either further described faculty work or were related to emerging university work. Number of peer reviewed publications, graduate committee work, and college curriculum design

represent core faculty work. Trademark, patent, copyright and work related to collaborating with industry represent emerging university work. Finally work related to grant funding was tracked as well. All questions related to these areas were given to all survey respondents regardless of their answers to the teaching, research or public service questions.

Publications, graduate committee, and college curriculum design work.

Publication activity was tracked by asking individuals how many publications they produced in their current job. Overall 17% ($n=165$) of respondents indicated their work had been published in a peer reviewed journal. Most of these individuals (72%, $n=118$) were in research job titles. The remaining 28% spanned across various non-research job categories that are shown in Table 5.1. The majority of those who indicated they were published (60%, $n=99$) stated they had five or fewer publications and 30% indicated they had between six and 20 publications. The remaining 10% indicated they had 21-30 publications. Note that the survey scale ended at 30 publications. It is possible that some respondents could have had more than 30 publications.

Job Category	Publications	Graduate Committee	# with Both
Administrative	3	4	1
Athletics	0	0	0
Communication/Media	3	0	0
Coordinator/Project Man	15	5	2
Development	2	0	0
Grants	0	0	0
Information Technology	3	1	0
My title is not listed	8	5	3
Medical	0	0	0
Other	0	0	0
Preservation	9	3	1
Research	118	49	45
Student Administrator	1	1	0
Service Teaching	3	3	1
Total	165	71	53

Table 5.1:   Published in Peer-Reviewed Journal and/or Served on Graduate Committee

A small number (7%, $n=71$) of "other professional" employees at UT Austin indicated having been a member of a graduate research project committee such as a doctoral dissertation or master's thesis committee. A large portion of committee work was performed by individuals in research job titles (60%, $n=49$). The remaining 40% held various titles which are listed by category in Table 5.1.

College curriculum design is also considered core faculty work. A fair number of "other professional" employees (11%, $n=108$) indicated they assisted in the design of college curriculum for a class they did not teach. Some of these respondents (35%, $n=38$) did not indicate teaching as part of their job. Figure 5.3 shows that most respondents (71%, $n=108$) indicated they assisted in 50% or less of the curriculum design. The remaining 19% stated they assisted in designing at least half of the curriculum.

Combined publications, graduate committee and curriculum design work serve as a deeper indicator that some "other professional" employees at UT Austin are performing work that is directly aligned with faculty work. The research job titles, which will be explored more deeply in the next section, show the closest alignment to faculty work. There were 45 individuals from the research job category who indicated they had published and served on a graduate committee as part of their current job. There were eight non-researchers who also indicated that they had published and served on a graduate committee. These job categories can be seen in Table 5.1.
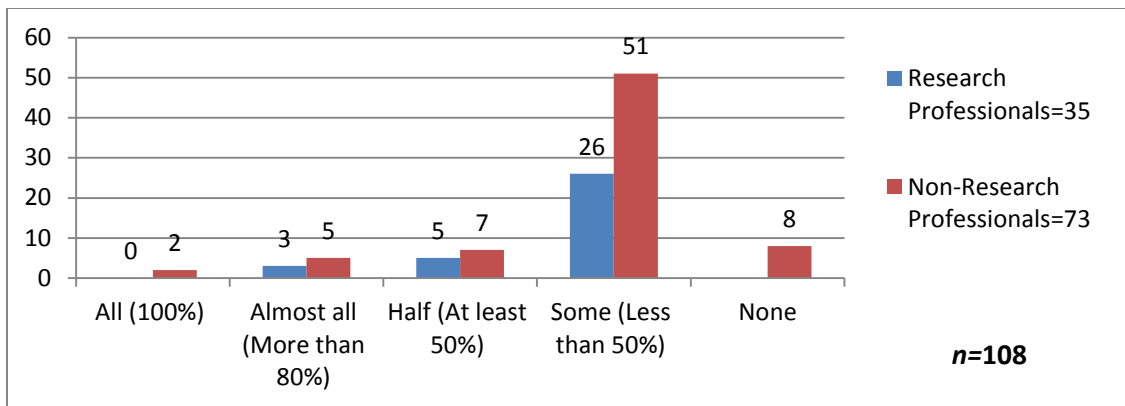
Figure 5.3:   College-Credit Curriculum Developed by Respondent, Taught by Another

Intellectual property and work related to collaborating with industry

Slaughter and Rhoades (2004) presented the concept of academic capitalism which is related to universities selling their intellectual assets. There were four questions in the survey that asked about intellectual property: two addressed copyright, one addressed trademarks and patents, and one addressed industry collaboration.

Copyright activity was minimal in the "other professional" category of employees. Copyright activity for workshop content accounted for 3% ($n=25$) and 1% for college curriculum. Trademark activity similarly reported minimal activity from "other professionals" at 2% ($n=17$). The job categories that reported copyright and trademark activity can be seen in Table 5.2.

Job Category	College Curriculum Copyright	Workshop Copyright	Trademarks
Administrative	1		
Communication/Media	1		1
Coordinator/Project Man	3	12	
Development	1	1	
Information Technology			1
My title is not listed	1	2	1
Research	4	4	14
Service Teaching		5	
Student Administrator		1	
Total	11	25	17

Table 5.2:   Copyright and Trademark Activity

The question related to collaboration with industry provided more substantial results at 12% (*n*=113). The research job category had the highest concentration of collaboration, with industry work at 47%, while 18% came from the coordinator/project manager category. Figure 5.4 provides a breakdown of job categories involved in collaboration with industry.
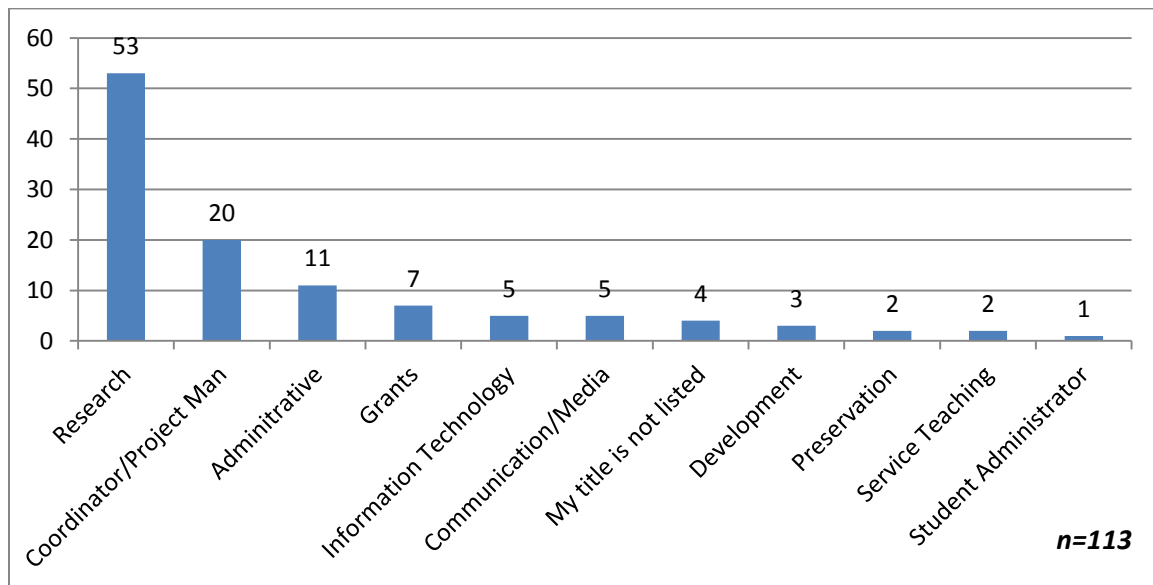
Figure 5.4:   Job Categories Collaborating with Industry

Grants

Grant activity was captured through four questions: (1) Have you applied for a grant in your current job, (2) What types of grants did you apply for?, (3) Did any of the grant applications receive funding?, and (4) What type of grant funding did you receive? There were 244 (25%) individuals who stated they have applied for a grant in their current job. The highest concentration of responses (60%, $n=147$) came from non-research professional job categories. Figure 5.5 provides a break-down of responses by job category; it shows that non-research professionals are the majority of "other professionals who apply for grants. Grant administrators only accounted for 4% ($n=9$) of "other professionals" who applied for grants.
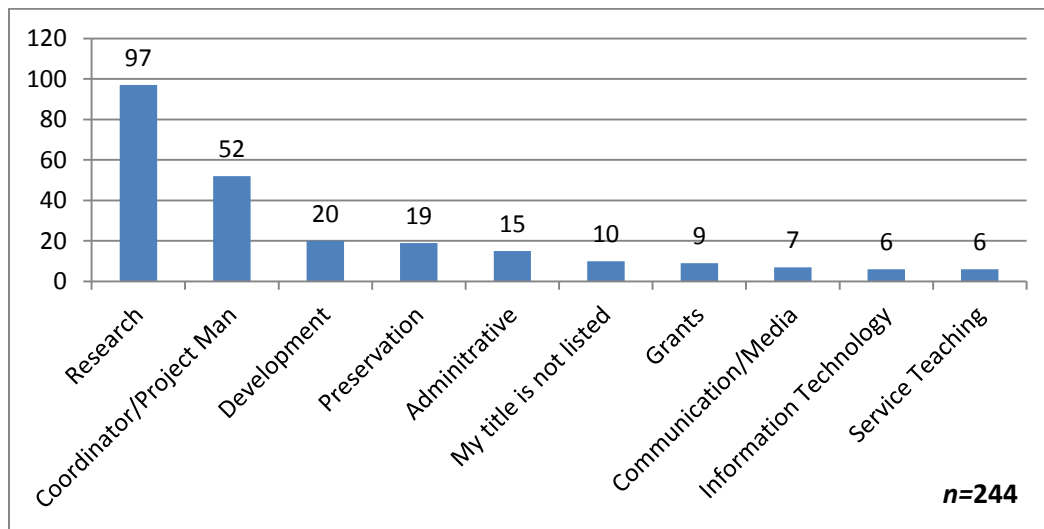
Figure 5.5:   Applied for Grant in Current Job

Table 5.3 provides data on the types of funding respondents applied for. Of the 244 individuals who applied for a grant, 80% ($n=196$) stated they were awarded funding

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for a grant. The highest concentration of grants, both applied and funded, came from the federal government and from foundations.

Grant Type	Applied		Awarded	
Foundation	134	55%	96	49%
Federal Government	178	73%	131	67%
State Government	74	30%	61	31%
Professional Association	40	16%	31	16%
Internal University	62	25%	45	23%
Other	35	14%	27	14%
	n=244		**n=196**	

Table 5.3:   Grant Type by Number of Job Incumbents

This section provided an overview of responses by all survey participants. The data from this section will be referenced and further analyzed in subsequent sections. The next sections will directly address research, teaching and public service work.

RESULTS: RESEARCH WORK

This section will further explore the work of those who answered "yes" (*n=392*) to performing research work. This section will first look at the responses for the research professional job category and then address non-research professional employees who also responded "yes" to the research question.

Research professionals

As established in Chapter 4, research professionals represented 35% (*N=1717*) of the "other professional" population. There were 211 (22%) survey respondents who identified a job title that fell into the research professional job category, 95% (*n=200*) of whom answered "yes" to performing research work. Qualitative information from the question which asked respondents to describe their jobs suggests that these individuals participated in a variety of research activities. Table 5.4 (see Appendix H) provides a

sampling of responses. There were 11 research professional respondents who selected "no" to the research question. However, a review of the qualitative responses to the question indicated that these 11 individuals were, in fact, involved in research work activities.

Responses to the question on how much time was spent on research-related work showed that 73% of research professionals indicated that research work accounted for more than 50% of their job. Figure 5.6, which compares responses from research and non-research professionals, provides a more detailed breakdown of responses to this question. This figure makes it clear that most individuals, who indicated that research work accounted for at least 80% of their job, were in research job titles (80% n=110).
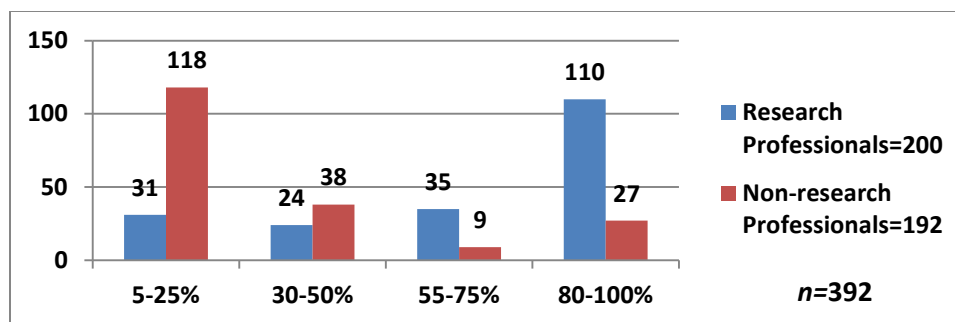
Figure 5.6:   Job Time Devoted to Research-Related Work

At least 70% of research professionals responded that they conducted background research, ran experiments/gathered original data, analyzed/coded data, wrote up results, and edited publication drafts as part of their jobs, and 61% indicated that they generate research questions. Qualitative data from the 22% who answered "other" suggest that these professionals also participated in designing research equipment, acquiring research equipment, and maintaining labs. For example, one non-faculty research professional,

designed telescope instrumentation "intended to advance the scientific understanding of the cosmos and universe;" another research professional provides "a computing environment for the scientists."

n=392	Background research	Run experiments/ gather data	Analyze/ code data	Write up results	Edit publication drafts	Generate research questions	Other
Research	155	155	160	155	147	130	47
Non-Research	113	71	71	84	63	51	64
Administrative	14	7	12	11	6	5	14
Athletics	0	0	0	0	0	0	0
Communication/Media	5	3	3	5	9	1	5
Coordinator/Project Man	27	19	18	24	14	14	16
Development	1	2	1	2	2	1	0
Grants	1	1	1	1	3	0	10
Information Technology	7	6	10	4	3	4	2
Medical	1	0	0	0	0	1	2
My title is not listed	15	9	7	13	8	10	0
Preservation	20	5	5	8	7	5	9
Service Teaching	9	7	9	6	7	5	5
Student Administrator	13	12	5	10	4	5	1
Total	268	226	231	239	210	181	111

Table 5.5:   Research Tasks Performed by Research and Non-Research Professionals (by Job Category)

As mentioned earlier, the questions related to publications, graduate committees, and curriculum design can serve as a deeper indicator that "other professional" employees at UT Austin are performing work directly aligned with faculty work. Table 5.1 above showed that over half of research professionals (56%, $n=118$) had published in a peer-reviewed journal, and 23% had served on a graduate research committee. Figure 5.3 showed that some research professionals (17%, $n=35$) were also involved in college-curriculum design. These numbers suggest that, contrary to the claims of the Goldwater Institute (Greene et al., 2010), research professionals serving as "other professions" at the university are more closely aligned with faculty work than administrative work.

Trademark and patent activity by research professionals was minimal at 7% (*n*=114). More substantially, 25% (*n*=53) of research professionals indicated they performed work collaborating with industry to push technology to market. Close to half of research professionals indicated they applied for grants (46%, *n*=97) and 39% (*n*=82) received funding. Finally, the survey results indicate that research professionals also perform teaching work (39%, *n*=82) and public service work (47%, *n*=99).

Non-research professionals

There were 772 (80%) non-research professionals who completed the survey, with 25% answering "yes" to the research question. Non-research professionals accounted for 49% (*n*=192) of all respondents who indicated that they performed research work. Figure 5.7 provides a distribution of all non-research job categories that answered "yes" to the research question. Most non-research professionals (61%, *n*=118) indicated that they spent 25% or less of their job performing research work.

Over half (60%, *n*=113) of non-research professionals who answered "yes" to the research question stated they performed background research. At least 30% indicated they ran experiments/gathered original data, analyzed/coded data, wrote up results or edited publications. A smaller number (28%) indicated they generated research questions and 57% stated they performed "other" research related duties. Qualitative responses show themes around grant management, preservation and sharing of primary sources to researchers, data management, and preparing external communications and presentations about research results.
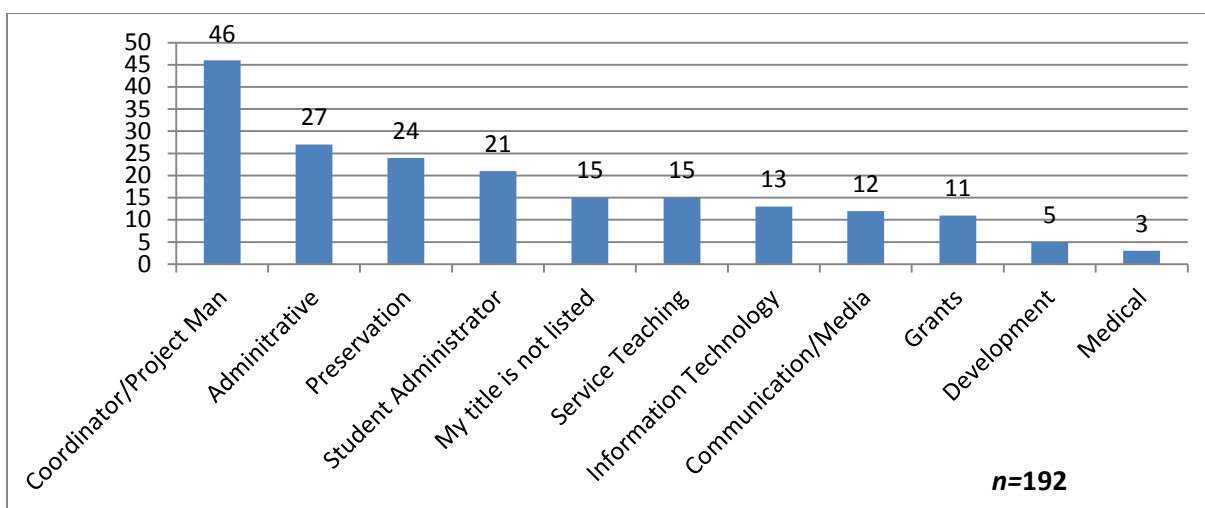
Figure 5.7:   Non-Research Professionals Who Perform Research Work (by Job
                Category)

To better understand the research work of non-research professionals, Table 5.6 (see Appendix I) provides a sampling of qualitative answers to two questions. The first question asked respondents to describe their job. The second asked respondents to identify work tasks that help advance the mission of research. The answers are sorted by job category and by the percentage of job time the respondent indicated was devoted to research work. The responses show a range of work activities devoted to research. On the administrative side, research work was devoted to grant management, outreach to industry, and managing/acquiring equipment. On the research side, this work was directed at designing equipment, collecting/reporting data, running experiments, and writing up results.

The survey data for research work tells a story that research work requires highly skilled human resources that go beyond faculty positions. The number of individuals, who indicated they performed research work was split almost evenly between research (51%) and non-research (49%) professionals. Qualitative data showed that most

individuals were involved in direct research activities. Other research activities mentioned—such as raising funds, ensuring a secure computing environment, purchasing and managing equipment—serve as additional descriptors of the work performed by administrative and non-administrative professionals in the pursuit of new knowledge.

RESULTS: TEACHING WORK

This section will further explore the work of those who answered "yes" (*n=389*) to performing teaching work. Teaching work was defined in the survey instrument as "instruction of a class, workshop or program that has stated learning objectives." Figure 5.8 provides an overview of the job categories of those who answered "yes" to performing teaching work; and it shows that the majority of teaching work was conducted by non-research professionals (79%, *n=308*).

The majority of those who indicated teaching was part of their job said that teaching accounted for 25% or less of their job (74%, *n=289*). Comparatively, 62% (*n=243*) of individuals who answered "yes" to performing research work indicated that research work accounted for 30% or more of their job. This suggests that teaching work was not a central aspect of "other professional" work; rather it appeared to be an aspect of many different types of jobs including research jobs. Figure 5.9 provides a more detailed view of teaching work percentages.
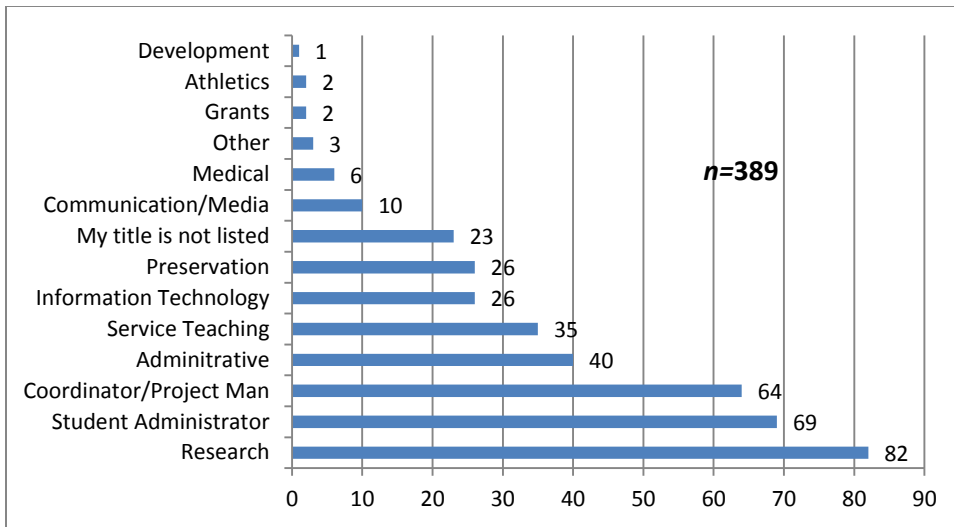
Figure 5.8: "Other Professionals" Who Perform Teaching Work (by Job Category)
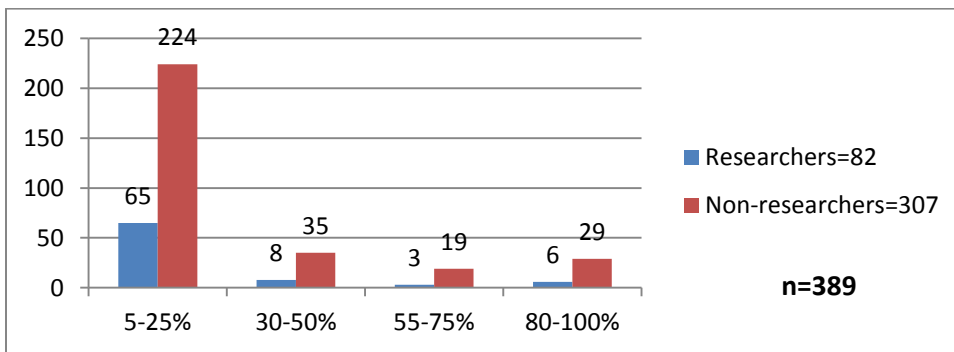
Figure 5.9: Job Time Devoted to Teaching-Related Work

Most "other professional" employees who answered "yes" to the teaching question stated that they taught workshops (62%, $n=242$). Workshops were defined in the survey tool as "non-college credit classes taught for skill or professional development purposes." Most of those individuals (95%) stated that they developed their own workshop content. In addition, 25 individuals stated that their workshop content was copyrighted.

Almost 25% ($n=92$) of respondents indicated they taught college credit courses. Of those, 71% ($n=65$) indicated they taught undergraduate classes and 48% ($n=44$) indicated they taught graduate courses. Most individuals (90%, $n=83$) indicated they developed some of the content for the course with 55% indicating they developed at least half of the course. A small percentage indicated they were teaching K-12 classes (10%, $n=38$) and a handful ($n=7$) indicated they taught infant to preschool students.

Finally, 40% ($n=157$) of respondents indicated they taught something "other" than the previously mentioned classes/courses. Qualitative answers from this question identified talks and lectures as a different type of teaching. For example, one respondent stated, "Talks for all kinds of groups about collections, especially photography." Other respondents indicated providing training on equipment/information technology and lab training. Another respondent stated, "Teach clients and users how to use software, train student staff and facilitate knowledge assessments each semester." Several respondents indicated they taught a seminar called a First-Year Interest Group (FIG).

In response to a follow-up question asking whether someone was conducting research on the respondent's teaching work, 25% ($n=99$) stated "yes." Some indicated that much of the research of their teaching work was for reporting purposes to granting, national, and state agencies or accreditation reporting. Other responses said data was tracked for program evaluation/improvement. A small number of responses indicated that someone was studying their teaching work for publication.

To better understand the jobs and work directed at teaching, Table 5.7 (see Appendix J) offers respondent answers to the request for a description of how the individual's job contributes to the mission of teaching. The information is arranged first by job category and then by the percentage of time devoted to teaching work. These responses show a variety of teaching activities spanning dissemination of research

knowledge, to teaching special needs children, to assisting with college curriculum design. While teaching is not a central purpose for most "other professional" jobs, teaching activity is being performed by many different job incumbents.

RESULTS: PUBLIC SERVICE WORK

This section will further explore the work of those who answered "yes" (*n=462*) to performing public service work. Public Service work was defined in the survey instrument as "non-instructional services beneficial to individuals and groups external to the university." Figure 5.10 provides an overview of the job categories for those who answered "yes" to performing public service work. The majority of individuals who indicated they perform public service work were non-research professionals (79%, *n=363*). Public Service received the highest number of responses of the three areas: research, teaching and public service.
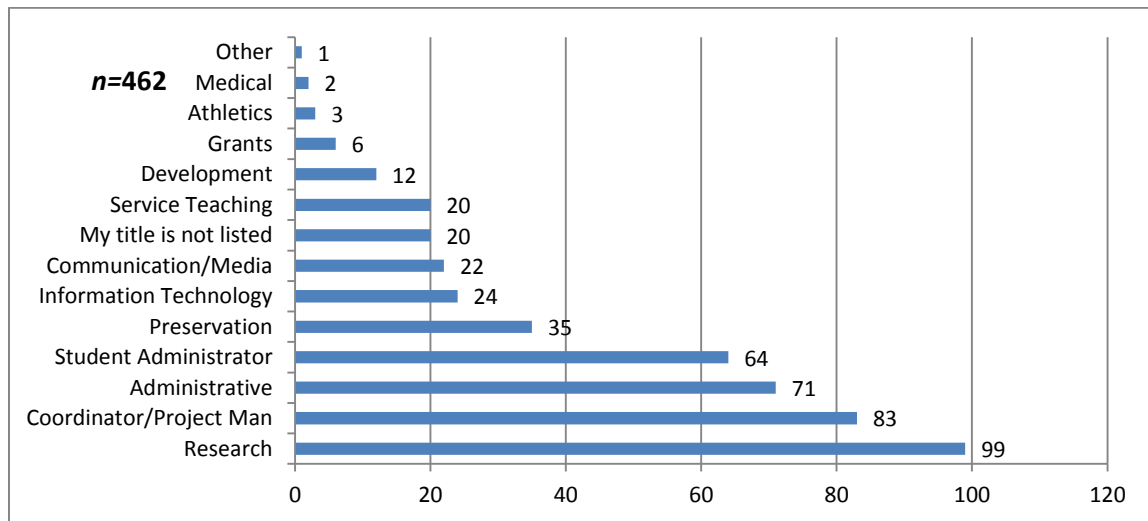
Figure 5.10: "Other Professionals" Who Perform Public Service Work (by Job Category)

The amount of time job incumbents devoted to public service work was higher than for teaching work. There were 194 individuals (43%) who indicated that public service work was 30% or more of their job, with 100 of those indicating that it was 80% or more as demonstrated in Figure 5.11. This indicates that there are jobs mostly devoted to providing public service work on behalf of the university.
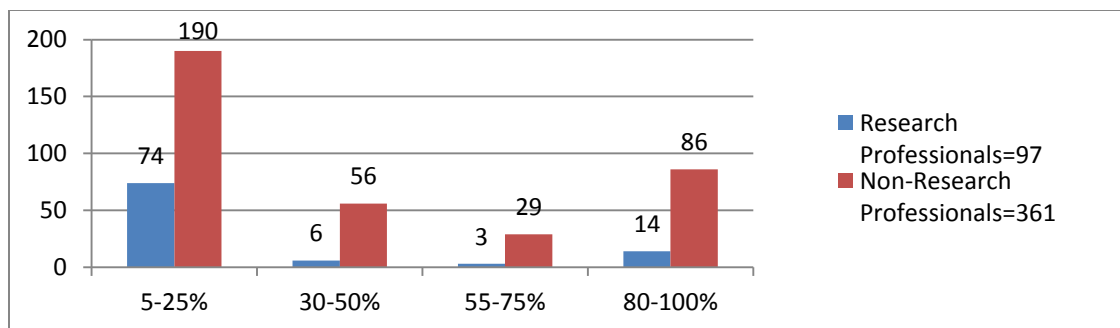
Figure 5.11:   Job Time Devoted to Public Service-Related Work.

Four individuals who stated they performed public service work did not answer the question related to percent time.

The survey asked individuals to indicate what type of public service their job was directed to provide. There were five different areas explored: (1) providing educational opportunities to underserved communities, (2) providing medical services, (3) promoting the democratic process, (4) preserving and disseminating information, and (5) preserving and promoting the arts. Table 5.8 provides an overview of responses by job category. The table shows that the highest concentration of responses was in the area of preserving and disseminating information (75%, $n=347$) and providing educational opportunities to underserved communities (73%, $n=338$).

Job Category	Educational Opportunity	Medical	Promoting Democracy	Preserving/Disseminating Information	Preserving and Promoting Art
Research Professionals	62	4	8	66	8
Non-Research Professionals	276	10	78	281	85
Coordinator/Project Man	72	1	25	58	17
Administrative	48	3	9	55	18
Student Administrator	55	0	12	45	9
Preservation	24	0	7	35	19
Information Technology	14	1	5	22	0
Communication/Media	15	0	4	21	3
My title is not listed	15	0	2	12	7
Service Teaching	20	2	10	15	6
Development	8	1	3	9	4
Grants	3	0	1	4	2
Athletics	1	0	0	2	0
Medical	1	2	0	2	0
Other	0	0	0	1	0
Total	338	14	86	347	93

Table 5.8:   Type of Public Service

For each of the five areas of public service work there was a follow-up question asking if anyone was conducting research on the respondent's public service work. The responses indicated that such research was conducted according to the following distributions: educational opportunities to individuals (28%, $n=95$), providing medical (29%, $n=4$), promoting democratic process (20%, $n=17$), preserving and disseminating information (18%, $n=62$), and preserving and promoting the arts (13%, $n=12$). Qualitative answers indicated that the research conducted was mostly for the purpose of reporting to non-profit, federal and state agencies providing educational opportunities to underserved groups. Additionally, some research was conducted for accreditation and program evaluation purposes.

Public service work had the highest response rate from "other professional" employees; it also had the second highest concentration of time devoted to a job. Table 5.9 (see Appendix K) shows a sampling of responses to the request for job descriptions

connecting the respondent's work to the mission of public service. These responses are sorted by job category and time devoted to public service work.

The respondents' descriptions also revealed some of the external populations served by university work. For instance, these descriptions indicate that there is a variety of work activity focused at communicating and informing the public of research conducted by the university. Sometimes the research described was is in the pursuit of improving social services and education; other times the research described was conducted in an effort to attract and prepare future students for an area of university study. Other public service activities were about providing access to information and the arts.

SUMMARY

This chapter presented an analysis of the "other professional" survey data. The analysis showed that "other professionals" were involved in core university work and in some instances were directly producing core university work. The results also showed the complexity of university work while shedding some light on the lesser acknowledged aspects of research, teaching, and public service work.

The majority of responses (78%, $n=761$) were provided by non-research professionals with 22% ($n=211$) of responses coming from research professionals. Seventy-eight percent ($n=767$) of respondents indicated they performed work in at least one of the three areas of teaching, research or public service. In addition some "other professionals" indicated they performed work activities that were more directly associated with faculty work: publishing in peer-reviewed journals (17%, $n=165$), serving on graduate committees (7%, $n=71$), developing college curriculum (11%, $n=108$), and applying for grants (25%, $n=244$). Emerging university work related to selling university

intellectual assets, also showed some activity from "other professionals" especially in collaborating with industry for the purpose of pushing research to market (12%, *n*=113).

Deeper analysis of the three areas of core university work provided some contextual information on the work activities of "other professionals." Research work was approached by first looking at the research professional job category, which showed that most research professionals (73%, *n*=145) stated that research work accounted for more than 50% of their job. Conversely most non-research professionals (61%, *n*=118), who performed research work, said that research work accounted for 25% or less of their job. For most non-research professionals research work is an aspect of their job but not the main focus.

Teaching work emerged as less significant than research or public service work. Only 15% (*n*=57) of those who indicated they performed teaching work stated that it accounted for more than 50% of their job. This suggested that teaching work was an aspect of "other professional" jobs rather than a primary focus. Some respondents who indicated they performed teaching work, (24%, *n*=92) stated that they taught college-credit classes. The job categories associated with college-credit teaching were Research Professional, Coordinator/Project Manager, and Student Administrators. The main type of teaching work performed by "other professionals" was workshops (62%, *n*=242). Those who taught also indicated that data was collected on their teaching work for reporting to grant, national and state agencies as well as to accreditation programs.

Almost a third (*n*=132) of public service respondents indicated that public service work accounted for over 50% of their job. This suggests that public service work is a central type of work for some "other professional" employees. Most public service work was devoted to providing educational opportunities to underserved communities (73%, *n*=338) and preserving and disseminating information (75%, *n*=347). Qualitative

responses showed a variety of public service activities that ranged from social services, to outreach activities focused at attracting future students, to specific areas of study especially in science and technology, to the preservation of and access to information. There was also some activity around researching and reporting public service work to grant, federal and state agencies just as was shown in the teaching section.

In summary, the survey data provided some contextual and descriptive information around "other professional" employees. They showed that a large portion of this population of employees is performing work that is more closely aligned with research and public service than administration. While teaching work didn't appear as significant as research or public service, it is work that is being performed by many individuals as part of their jobs.

CHAPTER 6: CONCLUSION

The central purpose of this study was to contribute to the lively discussion of the growth of American research universities. At a high level, the study sought to answer three main questions: (1) As part of their job, do "other professionals" at UT Austin conduct research, (2) …teach, or (3)… provide public service. Additionally, the study also responded to a call in the literature to further explore the "other professional" category of employees because it is the fastest growing category of university employees.

The survey data confirmed that most "other professional" employees (78%, *n*=759) at UT Austin perform research, teaching or public service work. Public service received the highest number of responses at 47% (*n*=462), followed by research (40%, *n*=392), and then teaching (40%, *n*=389). Some individuals (11%, *n*=112) stated that they performed all three areas of work, and 22% (*n*=220) answered "no" to all three areas. While this data answers the three main research questions, the more meaningful information was found in the follow-up questions that asked more specifically about work activities.

This chapter will address the three main research questions and interpret results by revisiting the Goldwater report (Greene et al., 2010), Rhoades' (1998) concept of "managerial professionals," and the literature on organizational evolution. The chapter will conclude with a discussion of study limitations and offer recommendations for further research on the "other professional" population.

GOLDWATER REVISITED

In August of 2010, the Goldwater Institute released to the public a report entitled "Administrative Bloat at American Universities," which received national and local media coverage (Greene et al., 2010). Several universities responded defensively to the

claims that universities were administratively bloated because the "other professional" category of employees grew significantly between 1993 and 2007. The main issue that universities responded to was that the report misrepresented the work of the "other professional" job category as purely administrative.

The population data for "other professional" employees at UT Austin showed that 20% (N=805) were in administrative titles such as managers, financial analysts, and conference coordinators. The remaining 80% (N=3220) were in other job categories such as research, coordinator/project manager, and student administrators. There were 217 (22%) survey respondents who fell into the administrative job category of whom 99% (n=214) answered "no" to performing research, teaching and public service work. All but three of the 762 (78%) non-administrative survey respondents indicated they performed at least one of the three areas of core work. These numbers show that while a segment of the "other professionals" at UT Austin were performing only administrative work, a sizable number were performing research, teaching, or public service work. Thus, the data contradicts what the Goldwater report stated: "Under any reasonable definition, these employees are engaged in administrative functions but clearly they are not directly engaged in teaching, research or service" (Greene et al., 2010, p.4).

Managerial Professionals

In 1998, Gary Rhoades called for a deeper look into the "sector of professionals in higher education that is becoming increasingly significant in and central to the missions of colleges and universities" (p.143). He named this segment of non-faculty professionals "managerial professionals" and suggested that these professionals were being miscalculated as administrative costs. Rhoades (1998) identified several characteristics for "managerial professionals": (1) facilitate the production of research; (2) facilitate the

production of instruction; (3) are located throughout the organization rather than in central administration; (4) have advanced degrees; (5) publish; (6) have bodies of technical knowledge; and (7) engage in entrepreneurial activities. Next we will compare these characteristics to the population and survey data to better understand "other professional" employee work at UT Austin.

Facilitate the production of research

At least 21% of survey respondents stated that they did the following research activities: conducted background research (27%, $n=268$), ran experiments/gathered data (23%, $n=226$), analyzed/coded data (24%, $n=231$), wrote up results (24%, $n=239$), and edited publication drafts (21%, $n=210$). There were 181 individuals (18%) who indicated they generated research questions.

Facilitate the production of instruction

While "other professionals" engage in less teaching work than research and public service, the survey data suggest that "other professionals" do teach and participate in work activities associated with producing instruction. The majority of these individuals (80%, $n=242$) indicated that they taught workshops. There were 389 (40%) of "other professional" employees at UT Austin who stated teaching was a part of their job. Almost 10% ($n=92$) of "other professionals" respondents indicated they taught college credit courses, and, of these, 90% ($n=83$) indicated they developed some of the content for the course(s) they taught. Additionally, 11% ($n=108$) of "other professional" employees at UT Austin assisted in the design of college curriculum for classes they did not teach. In addition to college instruction, there was evidence through the population data that a segment of "other professionals" was focused on teaching formal K-12 classes ($N=129$) or providing K-12 curriculum design consulting ($N=52$). The answers to the questions

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which asked participants to describe their job and how their job was connected to the three core work areas suggest that there may be others who participated in the production of instruction but did not teach.

Are located throughout the organization rather than in central administration

The population analysis showed that the majority (85%, *N*=4060) of "other professional" employees at UT Austin worked outside of a central administrative office. The highest concentration of "other professionals" was found in colleges (29%, *N*=1385) and research departments (28%, *N*=1334). Only 15% (*N*=716) were found in administrative departments. Note that these percentages utilize an *N*=4776 value which eliminates 170 employees with duplicate appointments.

Have advanced degrees

Almost half of "other professionals" at UT Austin had at least a master's degree (48%, *N*=2157), and 16% (*N*=710) had a doctoral degree. Also 38% (1710) had a bachelors' degree. Note that these percentages utilize an *N*=4450 and do not include the 496 post-doctoral fellows.

Publish

Overall, 17% (*n*=165) of survey respondents indicated their work had been published in a peer reviewed journal. The majority (60%, *n*=99) stated they had five or fewer publications, and 30% indicated they had between six and 20 publications. The remaining 10% indicated they had 21-30 publications.

Have bodies of technical knowledge

Qualitative answers to the question which asked individuals to describe their job showed that certain "other professional" employees had highly specialized skills and

bodies of knowledge. For example, one research professional uses: ". . . nuclear magnetic resonance spectroscopy to characterize compounds made in the departments of chemistry, chemical engineering, and pharmacy." A non-research professional who engages in research work is responsible: ". . . for coordinating the collection and maintenance of biodiversity data for Texas and Mexico, and using GIS and species distribution modeling software to analyze the biodiversity data (Sarkar Lab)." Another non-research professional, whose job supports instruction, stated: "I train faculty on how to evolve their pedagogical approach using technology as an integrated component to enhance teaching and learning processes." Finally, one respondent described public service work as part of the job: "Provide consultation and technical assistance to public school districts pertaining to educating students in homeless situations."

Engage in entrepreneurial activities

A modest segment (12%, n=113) of "other professional" employees at UT Austin indicated they collaborate with industry for the purpose of pushing research to market as part of their job. A handful of individuals also had their work copyrighted (n=36) or trademarked (n=17).

There was evidence that a large segment of "other professional" employees at UT Austin meet the characteristics of Rhoades' (1998) "managerial professional" description. The survey results support Rhoades'(1998) claims that a segment of university employees may be categorized incorrectly as administrative employees. While this study did not look specifically at administrative costs, it did provide a method for categorizing and accounting for work.

Organizational Structure and Evolution of Work

In addition to responding to both the Goldwater report (Greene et al., 2010) and Rhoades (1998), this study also sought to better understand the evolved work and possible organizational implications of that evolved work. Mintzberg (1979) and Kerr (1963) theorized an evolved organizational structure for higher education that Kerr (1963) termed the "multi-university" and that Mintzberg (1979) termed the "Professional Bureau/Adhocracy." Kerr's "multi-university" concept was a descriptive prediction that suggested universities would become many individual communities, and that the mission would continue to expand beyond the walls of the university into external communities.

Mintzberg (1979) associated the "professional bureaucracy" organizational structure with universities. In this structure, "operating professionals (i.e. faculty)" are at the core of the organization and typically work alone; there is limited middle management and a prominent support staff who are focused on supporting the operating professionals. Mintzberg (1979) stated that university work would evolve into a hybrid structure when "operating professionals (i.e. faculty)" wanted to be innovative in their research. This hybrid structure would take on a second structure called the "operating adhocracy" where "operating professionals join in organic multi-disciplinary teams to create new knowledge and skills" (p. 450).

The idea of evolved work is also addressed by Sigglekow (2002) who suggests that core elements of organizational work rarely change, but that additions to elaborating elements of that core work do change. As the results of this study suggest, publishing, grant management, curriculum design and entrepreneurial work may be regarded as the additional, evolving, elaborating elements of core university work.

This study sought to gain some understanding about the roles of "other professional" employees. Were these employee acting in supportive, administrative

positions or were they assisting with the production of research, teaching and public service? Much of the survey data presented suggested that a large number of "other professional" employees were engaged in work that was less like administrative support and more like work supporting or directly producing research, teaching, and/or public service. What hasn't been discussed is which job categories show the most evidence of evolved work (e.g., work that is less administrative and more closely aligned with core work). This section will explore the job categories of research, coordinator/project manager, information technology and student administrators.

Research job category

The research job category had the strongest connection to core work. There were 211 survey respondents of whom 95% (*n*=200) indicated they performed research work, 39% (*n*=82) indicated teaching, and 47% indicated public service. In addition to the three main areas, research professionals published (58%, *n*=118), applied for grants (46%, *n*=97), pushed research to market (25%, *n*=53), served on graduate committees (23%, *n*=49), taught college credit classes (18%, *n*=38), and had some trademarks registered (6%, *n*=14).

Coordinator/project manager job category

The coordinator/project manager category was interesting because many of these jobs did not have job descriptions in the UT Pay Plan system. There were 130 coordinator/project manager survey respondents of whom 84% (*n*=109) indicated they performed at least one of the three core work areas; 64% (*n*=83) indicated performing public service work, 49% (*n*=64) indicated teaching, and 35% (*n*=46) indicated research. In addition to the three main areas, coordinators/project managers applied for grants (40%, *n*=52). A modest number pushed research to market (15%, *n*=20), assisted with

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college curriculum design (14%, n=18), taught college credit classes (12%, n=15), and published (12%, n=15). Also a handful (n=5) served on graduate committees.

Student Administrators

There were 115 student administrator survey respondents of whom 88% (n=101) indicated they performed at least one of the three core work areas, 60% (n=69) indicated that they performed teaching work, 56% (n=64) indicated public service, and 18% (n=21) indicated research work. In addition to the three main areas, student administrators taught workshops (40%, n=46), mostly to undergraduate students. A modest number taught college credit classes (14%, n=16) and assisted with college curriculum development (12%, n=14).

Information Technology

There were 82 information technology survey respondents of whom 62% said "yes" to at least one of the three core work areas: 32% (n=26) indicated that they performed teaching work, 29% (n=24) indicated public service, and 16% (n=13) indicated research work. In addition to the three main areas, information technology professionals were involved in preserving/storing and disseminating data (27%, n=22) and teaching workshops to university staff (22%, n=18).

This analysis shows that while some "other professional" employees at UT Austin were performing administrative work, a large number were performing work that was more closely aligned with the three university core work areas of research, teaching, or public service. This more specialized work provides an indication that some of the "other professional" work has shifted away from mere support for faculty to participating on projects involving research, teaching, and public service. Furthermore, there is some indication that emerging university work related to entrepreneurial endeavors is also

being performed by "other professional" employees. In addition to reporting "other professional" work at UT Austin, this study also provided a mechanism for categorizing and accounting for university work. Next we will address study limitations and provide recommendations for future research.

STUDY LIMITATIONS AND FUTURE RESEARCH

This exploratory study on "other professional" employees at UT Austin has limitations on the scope of the study, response rates, survey questions and statistical analysis. The study was limited to one university in an effort to control terms and refine how to best assess core university work. Future research could utilize the survey tool and job categories at other institutions of similar size and mission to gain a more comparative view of the "other professional" category of employees in American research universities.

A second limitation to the study was the survey response rates. While a 20% response rate was an acceptable overall response rate for survey research, the study could have benefited from higher response rates at the job category level especially from the "other" and "service teaching" job categories. Future research should consider offering more than one incentive and also crafting targeted messages to each job category. Another recommendation is that future research should monitor responses by job category and then send targeted reminders to job categories that are showing low responses.

While the survey tool provided meaningful information related to research, teaching and public service work, the study could have benefited from an additional questions related to teaching work. The main filtering question relating to teaching asked whether individuals taught classes. If the person selected "no" to this question, the survey

did not provide the respondent with the follow-up questions related to teaching. This may have resulted in the lower numbers for teaching than originally anticipated. Qualitative answers to the question regarding employee contributions to the university's teaching mission suggest that "other professional" employees were involved in learning outcomes design, assessment, and reporting. Future research should consider adding an additional question that better aligns with one of Rhoades' (1998) descriptors for "managerial professionals": As part of your job, do you perform work that contributes to the production of instruction? Follow-up questions could directly ask about learning outcomes design, assessment and reporting activities. These items which showed up in qualitative answers to the survey also align with Groccia's (2012) model for university teaching and learning.

Finally, this study could have benefited from more sophisticated statistical analysis that would have allowed for more definitive answers rather than descriptive results. Future research could utilize population data to predict survey responses. The survey analysis could then compare predicted numbers with survey response numbers and offer discussion around the discrepancies.

SUMMARY

This study contributed to the discussion of the growing "other professional" category of employees by providing a mechanism to catalog and categorize work. The study utilized human resource job analysis techniques to build a job analysis survey tool. Descriptions of core university work were taken from the literature to define work activities associated with core university work (e.g. faculty work). Population analysis provided useful information to develop a core work category system. Finally the survey tool produced descriptive information about the work of "other professional" employees

at UT Austin. The result was that a sizable number of "other professional" employees at UT Austin in the spring of 2012 were performing university core work of research, teaching, and/or public service.

APPENDICES

Appendix A

IPEDS Eight Employee Categories

(1) Executive, administrative, and managerial employees—defined as individuals whose assignments require management of the institution or a customarily recognized department or subdivision thereof.

(2) Faculty (instructional/research/public service)—are employees identified by the institution as those whose initial assignments are made for the purpose of conducting instruction, research, or public service as a principal activity (or activities).

(3) Instruction/research assistants are students employed on a part-time basis for the primary purpose of assisting in classroom or laboratory instruction or in the conduct of research.

(4) Other professionals (support/service) are staff employed for the primary purpose of performing academic support, student service, and institutional support, whose assignments would require either a baccalaureate degree or higher or experience of such kind and amount as to provide a comparable background.

(5) Technical staff and paraprofessionals are persons whose assignments require specialized knowledge or skills that may be acquired through experience, apprenticeship, on-the-job training, or academic work in occupationally specific programs that result in a 2-year degree or other certificate or diploma

(6) Clerical and secretarial staff are persons whose assignments typically are associated with clerical activities or are specifically of the secretarial nature, including personnel who are responsible for internal and external communications and recording and retrieval of data (other than computer programmers) and/or information and other paperwork required in an office

(7) Skills crafts staff are defined as persons whose assignments typically require special manual skills and a thorough and comprehensive knowledge of the processes involved in the work, acquired through on-the-job training and experience or through apprenticeship or other formal training programs.

(8) Service/maintenance refers to persons whose assignments require limited degrees of previously acquired skills and knowledge and in which workers perform duties that result in or contribute to the upkeep of the institutional property (Integrated Postsecondary Education Data System (IPEDS), 2011).

Appendix B

Greetings,

My name is Elida Lee and I am a doctoral student in Higher Education Administration at the University of Texas at Austin. I am working on a doctoral research project to study the work of non-faculty professionals.

You have been identified as a non-faculty university professional. The survey purpose is to find out the type of work you perform in different domains. Your responses will contribute to a better understanding of the work contributions of non-faculty professionals at large public research universities.

The survey will ask you about the types of work you may perform in your role as a non-faculty professional employee for the University of Texas at Austin. When completing the survey only include work associated with this role. Do not include work that is associated with other roles or jobs you may hold such as work associated with being a graduate student or a second job at a different organization or university.

As an incentive for participation you will be offered at the end of the survey the opportunity to enter a drawing for a Amazon.com gift card.

Thank you very much for your participation.

Sincerely,
Elida Lee

Follow this link to the Survey:
Take the Survey

Or copy and paste the URL below into your internet browser:
https://utaustined.qualtrics.com/WRQualtricsSurveyEngine/?Q_SS=5hVXWtwcDCnUVmc_eQbHgUxT7nXpT7u&_=1

Follow the link to opt out of future emails:
Click here to unsubscribe

Appendix C

SURVEY INSTRUMENT

Introduction to Survey
You have been sampled as a non-faculty university professional. The survey purpose is to find out the type of work you perform in different domains. Your responses will contribute to understanding the work of non-faculty professionals within large public research universities.

The survey will ask you about the types of work you may perform in your role as a non-faculty professional employee for the University of Texas at Austin. When completing the survey only include work associated with this role. Do not include work that is associated with other roles or jobs you may hold such as work associated with being a graduate student or a second job at a different organization or university.

General Question Job Title
Please select your current job title from the list.
Do you currently have a dual-appointment at the University of Texas at Austin (e.g., have two separate job titles)?
- ☐ Yes
- ☐ No

IF YES
Is your second title a faculty title? (I.e. guest lecturer, lecturer, adjunct faculty etc.)
- ☐ Yes
- ☐ No

General Question Job Title
In two to three sentences describe your job at the University of Texas at Austin. Example: Provide consultation to faculty regarding curriculum design. Teach workshops to faculty and graduate students on instructional design principles.

General Question: Teaching
Section Break: The following questions are related to work considered teaching. Teaching work is defined as instruction of a class, workshop or program that has stated learning objectives. This does not include presentations or consulting work.

Think of the job you are currently in. Do you perform work that is considered teaching (instruction of a class, workshop or program that has stated learning objectives)?
- ☐ Yes
- ☐ No

IF YES

Over the course of a year, what percentage of your job do you spend on teaching related work (e.g., preparation, teaching, or assessing)? For example 5% of a full-time (40 hour per week) job equates to about a week and a half of work for a year.

- ☐ 5% increments

What types of classes, workshops, or courses do you teach? Select all that apply.

- ☐ College credit course
- ☐ K-12 classes (classes for a grade)
- ☐ Workshops (non-college credit classes taught for skill or professional development purposes)

IF COLLEGE CREDIT SELECTED

What type of college credit course(s) do you teach? Please select all that apply.

- ☐ Undergraduate
- ☐ Graduate
- ☐ Other
    - o Please describe

How much of the content for the college-credit course(s) did you develop on your own?

- ☐ All (100%)
- ☐ Almost all (More than 80%)
- ☐ Half (At least 50%)
- ☐ Some (Less than 50%)
- ☐ Not at all

IF WORKSHOP SELECTED

What types of learners participate in your workshops? (Select all that apply)

- ☐ Undergraduate students
- ☐ Graduate students
- ☐ University faculty
- ☐ University staff
- ☐ Learners external to the university

How long do the workshops you teach last? (Select all that apply)

- ☐ 1 hour or less
- ☐ A few hours
- ☐ Half Day
- ☐ Day
- ☐ 2-4 days
- ☐ 1 week
- ☐ Longer than a week

Do you develop any of your own workshop content?
- ☐ Yes
- ☐ No

Did the participants of the workshops pay to attend?
- ☐ Yes
- ☐ No

Has any of your workshop content been copyrighted?
- ☐ Yes
- ☐ No

Has any of the copyrighted material been sold in the external market?
- ☐ Yes
- ☐ No

General Question: Teaching
In your current job have you ever assisted in the design of a college credit course that someone else taught?
- ☐ Yes
- ☐ No

IF YES
What type of college credit course(s) do you design? Please select all that apply.
- ☐ Undergraduate
- ☐ Graduate
- ☐ Other
  - o Please describe

How much of the content for the college-credit course(s) that someone else taught did you develop on your own?
- ☐ All (100%)
- ☐ Almost all (More than 80%)
- ☐ Some (At least 50%)
- ☐ A little (Less than 50%)
- ☐ Not at all

Has any of the course content been copyrighted?
- ☐ Yes
- ☐ No

Has any of the copyrighted material been sold in the external market?
- ☐ Yes

95

☐ No

General Question: Teaching
While in your current job have you ever been a chair of a graduate level research project committee (e.g., doctoral dissertation, doctoral treatise or master's thesis or project committee)?
   ☐ Yes
   ☐ No

While in your current job have you ever been a member of a graduate level research project committee (e.g., doctoral dissertation, doctoral treatise or master's thesis or project committee)?
   ☐ Yes
   ☐ No

General Question: Research

Section Break Research: The following questions are related to work considered research. Research work is defined as that which results in the development of new knowledge either theoretical or applied.

Think of the job you are currently in. Do you perform work considered **or contributes to** scholarly research (e.g., Research that results in the development of new knowledge either theoretical or applied.)?
   ☐ Yes
   ☐ No

IF YES
Over the course of a year, what percentage of your job do you spend on research related work? For example 5% of a full-time (40 hour per week) job equates to about a week and a half of work for a year.
   ☐ 5% increments

What type of research work functions do you perform (select all that apply)
   ☐ Background research
   ☐ Running experiments/gathering original data
   ☐ Analyzing/coding data
   ☐ Writing up results
   ☐ Editing publication drafts
   ☐ Developing research projects or programs (generating research questions)
   ☐ Other
       o Please describe

General Question: Research
As part of your current job has your work been published in a peer-reviewed journal?
- ☐ Yes
- ☐ No

IF YES
How many peer-reviewed publications have you authored in your current job?
- ☐ Select 1-20

Has any of the research you have contributed to resulted in trademarks or patents?
- ☐ Yes (If yes, please describe)
- ☐ No

General Question: Research
As part of your current job have you submitted at least one grant proposal?
- ☐ Yes
- ☐ No

IF YES
Indicate which type of grant funding sources you have applied for. (Select all that apply)

- ☐ Foundation
- ☐ Federal Government
- ☐ State Government
- ☐ Professional Association
- ☐ Internal University
- ☐ Other

Did any of the grant proposals submitted receive funding?
- ☐ Yes
- ☐ No

General Question: Research
In your current job do you collaborate with industry for the purpose of pushing research to market?
- ☐ Yes
- ☐ No

IF YES
Over the course of a year, what percentage of your job do you spend on work that directly contributes to collaborating with industry for the purpose of pushing research to market? For example 5% of a full-time (40 hour per week) job equates to about a week and a half of work for a year.
- ☐ 5% increments

General Questions: Public Service
Section Break: The following questions are related to work considered public service. Public service work is defined as non-instructional services beneficial to individuals and groups external to the university.

_____

In your current job do you perform work that directly contributes to increasing educational opportunities to individuals (i.e., tutoring in underserved communities, educating students and parents on benefits of college, etc.)?
- ☐ Yes
- ☐ No

IF YES
Over the course of a year, what percentage of your job do you spend on work that directly contributes to increasing educational opportunities to individuals? For example 5% of a full-time (40 hour per week) job equates to about a week and a half of work for a year.
- ☐ 5% increments

In your current job do you perform work that directly provides medical services to the community?
- ☐ Yes
- ☐ No

IF YES
Over the course of a year, what percentage of your job do you spend on work that directly provides medical services to the community? For example 5% of a full-time (40 hour per week) job equates to about a week and a half of work for a year.
- ☐ 5% increments

In your current job do you perform work that directly contributes to stimulating participation/educating students or the public in the democratic process?
- ☐ Yes
- ☐ No

IF YES
Over the course of a year, what percentage of your job do you spend on work that directly contributes to stimulating participation/educating students or the public in the democratic process? For example 5% of a full-time (40 hour per week) job equates to about a week and a half of work for a year.
- ☐ 5% increments

In your current job do you perform work that directly contributes to preserving, storing or disseminating information either physically or electronically?

- ☐ Yes
- ☐ No

IF YES

Over the course of a year, what percentage of your job do you spend on work that directly contributes to preserving, storing or disseminating information either physically or electronically? For example 5% of a full-time (40 hour per week) job equates to about a week and a half of work for a year.

- ☐ 5% increments

In your current job do you perform work that directly contributes to preserving and promoting the arts?

- ☐ Yes
- ☐ No

IF YES

Over the course of a year, what percentage of your job do you spend on work that directly contributes to preserving and promoting the arts? For example 5% of a full-time (40 hour per week) job equates to about a week and a half of work for a year.

- ☐ 5% increments

General Question: Career Aspirations

Section Break: The following questions seek to understand your future career plans.

How likely are you to be performing the same work in five years?

- ☐ Highly likely
- ☐ Likely
- ☐ Somewhat likely
- ☐ Somewhat unlikely
- ☐ Unlikely

IF SOMEHWHAT LIKELY, SOMEWHAT UNLIKELY, UNLIKELY

What type of work/job do you strive to have in the next five years?

General Question: Career Aspirations

Do you consider your current job as training for a future faculty position?

- ☐ Yes
- ☐ No

Do you strive to have a faculty position at this or another university?

- ☐ Yes
- ☐ No

IF YES

In how many years do you expect to have a faculty position?

- ☐ Now—I already have an offer
- ☐ Within the next 2 years
- ☐ Within the next 5 years
- ☐ Within the next 10 years

General Question: Describe anything else

In the modern university different types of professionals both faculty and non-faculty perform work that directly contributes to advancing the missions of teaching, research and public service. The following questions seek to gather any additional information (besides the ones we have asked) about how your job contributes to any of the three missions.

What additional tasks do you perform that help advance the mission of teaching?

What additional tasks do you perform that help advance the mission of research?

What additional tasks do you perform that help advance the mission of public service?

Please list or describe anything else you feel is important or significant about your university work?

Appendix D

Consent to Participate in Internet Research

Identification of Investigator and Purpose of Study
You are invited to participate in a research study, entitled "The Evolving American Research University and Non-faculty Professional Work." The study is being conducted by Elida Lee and the Department of Educational Administration of The University of Texas at Austin, 1 University Station D5400, 512-232-2325, eponce@mail.utexas.edu. The purpose of this research study is to examine non-faculty professional work. Your participation in the study will contribute to a better understanding of the work contributions of non-faculty professionals. You are free to contact the investigator at the above address and phone number to discuss the study. You must be at least 18 years old to participate.

If you agree to participate:
The survey will take approximately 20 minutes of your time. You will complete an activity about non-faculty professional work. You will not be compensated. As an incentive for participation you will be offered at the end of the survey the opportunity to enter a drawing for a $250 Amazon.com gift card.

Risks/Benefits/Confidentiality of Data
There are no known risks. There will be no costs for participating, nor will you benefit from participating. Your name and email address will be kept during the data collection phase only; it will allow us keep track of who has participated.. A limited number of research team members will have access to the data during data collection. Identifying information will be stripped from the final dataset.

Participation or Withdrawal
Your participation in this study is voluntary. You may decline to answer any question and you have the right to withdraw from participation at any time. Withdrawal will not affect your relationship with The University of Texas in anyway. If you do not want to participate either simply stop participating or close the browser window.
To ensure we have a representative sample, we will send periodic reminders about the study. If you do not want to receive any more reminders, you may email us at eponce@mail.utexas.edu.

Contacts
If you have any questions about the study or need to update your email address contact the researcher Elida Lee at 512-232-2325 or send an email to eponce@mail.utexas.edu. This study has been processed by The Office of Research Support at The University of Texas and the study number is 2012-03-0097.

Questions about your rights as a research participant.
If you have questions about your rights or are dissatisfied at any time with any part of the study, you can contact, anonymously if you wish, the Office of Research Support by phone at (512) 471-8871 or email at orsc@uts.cc.utexas.edu.

Thank you.

I have read and understood the above consent form, and I know I have to option to print a copy of it. I desire of my own free will to participate in this study.

Appendix E

JOB TITLES CODES

Research-Work directed at producing research (SOC 17, 19, 45, 39)

Administrative-Jobs which support the business and operations of the university (SOC 11, 13, 23, 43, 25)

Coordinator-Job titles which had coordinator in the title

Information Technology-Jobs directed at building and/or maintaining computer and information technology systems (SOC 15)

Student administrator- Jobs which directly support students through advising and career development (SOC 21, 25)

Service Teaching- Jobs focused at teaching individuals external to the university. This can range from K-16 education to adults for professional development. (SOC 25)

Other-Jobs that did not fit into significant categories of work (SOC 17, 33, 37, 39, 41, 45, 51, 29)

Preservation-Jobs focused at preserving knowledge, art, and history (includes library and museum jobs) (SOC 25, 27)

Medical- Jobs which provide medical services to the university community (SOC 29, 21)

Project management- jobs which had project management in the job title

Development- jobs focused at raising money for the university

Athletics-Jobs focused at supporting intercollegiate athletics functions and goals (SOC 27)

Grants-Jobs focused at applying and managing grant funding (SOC 13)

Communication and Media Writing- Jobs focused at internal and external communication, media and writing. (SOC 27, 19)

2010 SOC Major Groups

11-0000 Management Occupations
13-0000 Business and Financial Operations Occupations
15-0000 Computer and Mathematical Occupations
17-0000 Architecture and Engineering Occupations
19-0000 Life, Physical, and Social Science Occupations
21-0000 Community and Social Service Occupations
23-0000 Legal Occupations
25-0000 Education, Training, and Library Occupations
27-0000 Arts, Design, Entertainment, Sports, and Media Occupations
29-0000 Healthcare Practitioners and Technical Occupations
31-0000 Healthcare Support Occupations
33-0000 Protective Service Occupations
35-0000 Food Preparation and Serving Related Occupations
37-0000 Building and Grounds Cleaning and Maintenance Occupations
39-0000 Personal Care and Service Occupations
41-0000 Sales and Related Occupations
43-0000 Office and Administrative Support Occupations
45-0000 Farming, Fishing, and Forestry Occupations
47-0000 Construction and Extraction Occupation
49-0000 Installation, Maintenance, and Repair Occupations
51-0000 Production Occupations
53-0000 Transportation and Material Moving Occupations
55-0000 Military Specific Occupations

(U.S. Bureau of Labor Statistics, 2010)

DEPARTMENT CODES

College Department- academic units which teach and research on specific areas of study

Research Centers- departments which are solely focused on producing research

Administrative Departments- provide support functions to the university and do not directly produce academic work

Service Departments- provide public services that extend beyond the university.

Appendix F

Table 4.2: Job Titles with Four or More Incumbents

Job Title	Count	Job Title	Count	Job Title	Count
POSTDOCTORAL FELLOW	496	ASSOC DIR FOR DEVPMENT	21	ASST SPORTS INFO DIR	7
PROGRAM COORDINATOR	256	SOC SCI/H R ASSOC IV	21	COMM/MARKETING MGR	7
RESEARCH ASSOCIATE	235	SR GRAPHICS DESIGNER	21	CONFERENCE COORD I	7
SR PROGRAM COORDINATOR	141	SPECIAL ASSISTANT	20	EDITOR IV	7
ENG SCI	124	FIN MANAGER	19	RESEARCH ENGINEER	7
SR S DEVLOPER/ANALYST	120	ASST ACAD ADVISOR	18	SAFETY SPECIALIST I	7
EXECUTIVE ASSISTANT	119	COMM COORD	18	STUDENT FIN AID OFC IV	7
PROFESSIONAL LIBRARIAN	107	COUNSELING SPEC III	18	ASST TO THE DIRECTOR	6
UT UCS TEACHER	104	FIELD TRAINER/ANALYST	18	CAREER,COUNSEL/PLACE CO	6
MANAGER	95	ACCOUNTANT II	17	COMMUNICATIONS COORD	6
RESEARCH SCIENTIST	93	PHYSICIAN	17	DEV RESEARCHER	6
RES ENGR/SCI ASSOC III	85	SOFTWARE ENGINEER	16	DOCUMENTATION SPEC	6
A&P HOURLY EMPLOYMENT	83	SR ENGINEERING SCI	16	HR PARTNER	6
RESEARCH FELLOW	77	GRAPHICS DESIGNER	15	PSYCHOLOGIST III	6
SOC SCI/H R ASSOC III	75	NETWORK ENGINEER	15	SAFETY SPECIALIST II	6
RES ENGR/SCI ASSOC IV	74	SR PLACEMENT REP	15	SR DEPART BUYER	6
RES ENGR/SCI ASSOC I	70	EVENTS MANAGER	14	SR RESEARCH FELLOW	6
STUDENT DEVEL SPEC I	68	HR COORDINATOR	14	STUDENT FIN AID OFC I	6
SR ACAD ADVISOR	66	HUMAN RESOURCES REP	14	TRAINING SPECIALIST III	6
ENG SCI ASSOCIATE	65	PUB AFF REP	14	COUNSELING SPEC IV	5
EXTENSION INSTRUCTOR	64	STAFF NURSE III	14	INFORMATION WRITER II	5
RES ENGR/SCI ASSOC II	60	STUDENT FIN AID OFC II	14	INST TECH SPECIALIST	5
SR RESEARCH SCIENTIST	54	BUSINESS ANALYST	13	MGR MEDIA PRODUCTION SV	5
ADMIN MGR	52	ON-AIR PRODUCER/TALENT	13	MGR, LIBRARY SERVICES	5
PROJECT MANAGER	52	SEN FINANCIAL ANALYST	13	PHARMACIST II	5
RES ENGR/SCI ASSOC V	51	ADMIN SERV OFFICER II	12	RECRUITMENT SUPP SPEC	5
ASST COACH	48	DATABASE COORDINATOR	12	SAFETY SPECIALIST III	5
SOFTWARE DEV/ANALYST	48	DEPT BUYER	12	SR PROJECT MANAGER	5
SOC SCI/HUM RES ASSOC I	45	MARKETING COORDINATOR	12	SR SOCIAL WORKER	5
ACAD ADV COORDINATOR	42	PROJECT COORDINATOR	12	SUPV ATH FAC/EQPMT/MAIN	5
GRANTS & CONTRACTS SPEC	42	ASST TO THE DEAN	11	UIL PROGRAM DIRECTOR	5
SR IT MANAGER	41	SR HR COORDINATOR	11	ASST COMM/MKT MANAGER	4
ASST DIR DEVELOPMENT	39	TECH WRITER/EDITOR II	11	BOX OFFICE MANAGER	4
STAFF NURSE II	38	UIL PROGRAM ADMIN	11	COMM ANALYST/DESIGNER	4
FIN ANALYST	36	ACCOUNTANT I	10	DB ADMINISTRATOR	4
INFO TECH MANAGER	36	DEV MGNR FOR ATHLETICS	10	EDITOR III	4
SR. FIELD TRAINER/ANYST	34	EDITOR II	10	HOST/PRODUCER	4
MUSIC ACCOMPANIST/TEACH	33	SR NETWORK ENGINEER	10	HR SERVICES COORDINATOR	4
DIR OF DEV	32	SR STU AFFAIRS ADMIN	10	LEARNING SPECIALIST I	4
SR SOFTWARE ENGINEER	31	STUDENT DEVEL SPEC II	10	LEARNING SPECIALIST III	4
WEBMASTER	31	ADMISSIONS COUNSELOR II	9	MARKETING MGR	4
SR GRANTS CONTRCTS SPEC	30	CONFERENCE COORD II	9	MGR OF GRAPHICS SVCS	4
STUDENT AFFAIRS ADMIN	30	DEPUTY DIRECTOR	9	PLACEMENT SPEC	4
SOC SCI/HUM RES ASSOC V	29	TECH WRITER/EDITOR III	9	PSYCHOLOGIST IV	4
SOC SCI/H R ASSOC II	27	TECH WRITER/EDITOR IV	9	PSYCHOLOGY INTERN	4
WEB DESIGNER	26	CURATOR	8	REGISTERED DIETITIAN	4
ADMIN SERV OFFICER I	25	EXEC DIR DEVELOPMENT	8	SAFETY SPECIALIST IV	4
TRAINING SPECIALIST II	25	FINANCIAL OFFICER	8	SENIOR REPORTER	4
UT ELEM SCHOOL TEACHER	25	INST DESIGNER	8	SR HR ADVISOR	4
ACADEMIC COUNSELOR	23	INTL ADVISOR II	8	TECH LICENSING SPEC	4
ASSOC ACAD ADVISOR	23	PROF NURSE PRAC	8	TECH WRITER/EDITOR I	4
PROJECT SPECIALIST	23	STUDENT DEVEL SPEC III	8		
COORDINATOR	22	STUDENT FIN AID OFC III	8	Total Job Titles	159
MEDIA COORDINATOR	22	TRAINING COORDINATOR	8	Total Incumbents	4742

105

Appendix G

Table 4.3:   Job Titles with Less Than Four Incumbents

Job Title	#	Job Title	#	Job Title	#
ACCOUNTANT III	3	INFO SECURITY ANALYST	2	JOURNALS MGR, U T PRESS	1
ASST MANAGER	3	INFORMATION WRITER I	2	LEAD HR PARTNER	1
ASST TO THE VICE-PRES	3	INSTITUT RESEARCH ANALY	2	LEARNING SPECIALIST II	1
CAREER COUNSELOR I	3	INTERNAL AUDITOR I	2	MANAGER, KUT RADIO	1
CAREER COUNSELOR II	3	INTERNAL AUDITOR III	2	MGR, WORKERS' COMP INS	1
CHILD CARE SVCS MGR	3	INTERNTNL PRGM ADMIN	2	MKT RESEARCHER	1
CONSERVATOR	3	LEARNING SPECIALIST IV	2	OMBUDSPERSON (STAFF)	1
DEVELOPMENT OFFICER	3	MGR, PUBL/PROMO/PUB REL	2	OMBUDSPERSON (STUDENT)	1
ENGINEER	3	NETWORK SEC ANALYST	2	PATENT ADMINISTRATOR	1
INTERIOR DESIGNER	3	PHYSICIAN-SPEC-PSYCH	2	PRODUCER	1
INTERNAL AUDITOR IV	3	PRINCIPAL HR CONSULTANT	2	REC SPORTS PROG COORD	1
INTL ADVISOR III	3	SR BUSINESS ANALYST	2	RISK AND INS ANALYST	1
MKT MANAGER	3	SR DB ADMINISTRATOR	2	SPORTS VIDEO SPECIALIST	1
NETWORK ANALYST	3	SR INFO SECURITY ANLST	2	SR BUDGET ANALYST	1
PHYSICIAN ASSISTANT	3	SR RESEARCH ENGINEER	2	SR BUYER	1
PRODUCTION COORDINATOR	3	WORK CONTROL SUPV	2	SR CONSERVATOR	1
PUBLICATIONS EDITOR	3	ADMIN SVCS OFFCR III	1	SR HOST/PRODUCER	1
REPORTER	3	ARCHIVES TRANSLATOR	1	SR HUMAN RESOURCES REP	1
SAFETY COORDINATOR	3	ARTIST III	1	SR OPER SYS SPEC	1
SOCIAL WORKER II	3	ASSOC DEV OFFICER	1	STUDENT DEVEL SPEC IV	1
SOCIAL WORKER III	3	ASST CHEERLEADER COORD	1	SYSTEMS ANALYST	1
SR NETWORK SEC ANALYST	3	ASST CONSERVATOR II	1	UIL WAIVER OFFICER	1
SR RETAIL MANAGER	3	ASST CURATOR	1	VETERINARIAN	1
SR SYSTEMS ANALYST	3	ASST DEV OFFICER	1		
SR TECH ARCHITECT	3	ASST DIR & FIN OFF	1		
SR TESTING SPECIALIST	3	ASST DIR RES REL	1		
TECHNICAL COORDINATOR	3	ASST PRODUCER	1		
ACCOUNTING GROUP SUPV	2	ATHLETICS PUB SUPV	1		
ACQUISITIONS EDITOR	2	ATTORNEY	1		
ANIMAL RESOURCES MGR	2	BUS CONTRACTS ADMIN	1		
ART REGISTRAR	2	BUSINESS MANAGER	1		
ASSOC BUS CONTRACT ADM	2	CHEERLEADER COORDINATOR	1		
ASST CONSERVATOR III	2	CHIEF, PHAR SERV	1		
ATHLETIC EQUIPMENT MRG	2	COPY SERVICES MGR	1		
BUDGET ANALYST	2	COUNSELOR	1		
BUYER I	2	DIR OF CONTINUING EDUC	1		
BUYER II	2	DIRECTOR OF PLACEMENT	1		
BUYER III	2	EDITOR	1		
CAPT UNIVERSITY POLICE	2	EDITOR I	1		
CAREER DEV SPEC	2	ENTREPRENEUR RESIDENCE	1		
CERTIF ADMINISTRATOR	2	FIRE MARSHAL	1		
COMMUNICATIONS SPEC	2	FLEET MANAGER	1		
CONSULTANT	2	INFORMATION ANALYST	1		
COUNSELING SPECIALIST I	2	INFORMATION WRITER III	1		
GRANTS & CONTRACTS MGR	2	INTERNAL AUDITOR II	1	Total Job Titles 115	
HORTICULTURIST	2	IT AUDITOR	1	Total Incumbents 204	

Appendix H

Table 5.4:   Job Descriptions by Research Professionals in "Other Professions"

Job Title	Job Description
RES ENGR/SCI ASSOC I	"Manage a research lab in the psychology department. Set up appointments to run participants and work closely with post-docs and faculty to design and execute research experiments."
RESEARCH ENGINEER	"Conduct sponsored research on transportation issues."
SOC SCI/H R ASSOC II	"Conceptualize and organize exhibitions of art at the Blanton museum of art. Have in the past worked as an adjunct lecturer in COFA."
RES ENGR/SCI ASSOC II	"I design telescope instrumentation for McDonald Observatory. This includes both scientific instruments and optical design."
RESEARCH ASSOCIATE	"Perform research work and guide graduate student in Microelectronics Research Center at UT Austin. My research topic includes developing nanofabrication platforms and novel materials that will enable high performance nanoeletronic devices on a flexible substrate."
RES ENGR/SCI ASSOC II	"Manage the vertebrate fossil conservation and preparation laboratories at Texas Natural Science Center. Organize and perform field work to collect specimens, train employees and volunteers in lab techniques, teach GEO 388P Paleontological Laboratory Techniques. Assist lab director with daily building maintenance and Facilities interface, EHS contact for biological and chemical waste disposal."
ENG SCI	"I perform research on acoustics and sonar systems at the Applied research Laboratories. Duties include system design, algorithm design, data collection and analysis."
RESEARCH ASSOCIATE	"Conduct education research on resources and services developed for K-12 mathematics education. Supervise 2 full-time colleagues and 3 GRAs also conducting this research. Write research and evaluation sections of grant proposals. Conduct external evaluations for other entities as time and funding permits. Serve as Departmental Review Chair for Research on Human Subjects."
ENG SCI	"Research, design, development, test, install, and support of sonar and related systems for the US Navy and other US Government sponsors. Manage students and other engineers in support of these goals."
RES ENGR/SCI ASSOC II	"Use nuclear magnetic resonance spectroscopy to characterize compounds made in the departments of chemistry, chemical engineering, and pharmacy. Train graduate students, undergraduates, and postdocs in the use of the NMR instruments."
RES ENGR/SCI ASSOC IV	"I facilitate organizational change processes in participating public health organizations. I also collect process and other evaluation data on projects with organizational partners."
RES ENGR/SCI ASSOC IV	"Conduct research about past climate changes. This involves fieldwork in remote tropical locations to collect samples to study. Upon returning to UT, I conduct lab work to measure the samples. I also write papers about the results and proposals to conduct future research."
RES ENGR/SCI ASSOC II	"Provide support for undergraduate teaching laboratory classes. Purchase, organize, maintain, and create supplies necessary for the operations of said classes. Troubleshoot problems with equipment, cultures, and experimental design when necessary."
RESEARCH ASSOCIATE	"Primary duty is to manage the radiation protection program at the Nuclear Engineering Teaching Laboratory (NETL). Secondary duty is the coordinate the service work projects at NETL."

Appendix I

Table 5.6:   Job Duties of Non-Research Professionals by Job Category, Including
Percentage of Job Time Devoted to Research Work

Administrative	
(1) I serve as the Chief of Staff to an academic program, research institute and library. I provide administrative direction and planning for faculty and staff. (2) Coordinate and support competitive research grant programs to fund the research of faculty and students.	5%
(1) I am responsible for the administrative coordination of the Dept. of Mechanical Engineering. This includes HR issues, Institutional compliance, academic administration (faculty hiring, assignments, etc.); nearly all functions of the department with the exception of facilities and IT. (2) Departmental outreach, industrial affairs, development.	5%
(1) Official job title is "International Risk Analyst". I am the primary crisis manager for student crises abroad and oversee high risk travel for UT faculty, staff, and students. I am the 24/7 crisis responder for the UT International Office, and focus on all aspects of student health and safety when traveling abroad. (2) I analyze the risks associated with conducting research abroad and work to enable that research to continue safely.	20%
Assist various researchers with post-award administration of federal and state funded research grants and contracts.	25%
(1) Physical plant manager at McDonald Observatory. Oversee, manage, support the diverse science and operations of the remote McD research facility. We remove and recoat multi-million dollar telescope mirrors, fight fires, install robotic world telescope systems, bury dogs, clean sewers, support some of the world's leading astro-physicists in the quest for knowledge at the edge of the universe..........really. (2) Dark Skys (lighting) support, NPS program development.	50%
(1) Support grants - post award. Back office for a film production organization associated with the college. Support Dean's Office. (2) Support post-award administration and occasionally help faculty with the proposal process.	60%
(1) Research manager for a large organized research unit funded primarily by sponsored projects. (2) Responsible for the administrative and research support of a large organized research unit requiring overall management of administrative and research services, projects, reports and finances. Manages grant applications, progress reports, budgets and accounts for an ORU largely supported by sponsored projects. Responsible for annual budget and fiscal management.	75%
Manage a core facility within the College of Pharmacy	90%
Coordinator/Project Man	
(1) The purpose of the contract is to provide support for Border Affairs team at the Texas Commission on Environmental Quality (TCEQ) in implementing various border programs, including the Border 2012 program in the Tri-State region. The team works on a variety of issues related to the TCEQ's overall mission and with specific objectives in the Texas-Mexico border region. Collaboration is often cross border in nature, interrelated with federal, state, local and tribal entities in Mexico and U.S. (2) I provide information on water resources, state data, or marrying people with the right information to collaborate on whatever issue is being investigated.	10%
(1) Coordinate most aspects of the Undergraduate Programs for a Department: Recruitment, Admissions, some Advising (back-up support, career, orientation), Registration, Curriculum (course inventory) and Degree Planning/Updates, Student Record Verifications, Student Support Services, Support some Scholarship processes, handle some aspects of Community Outreach and Tours, Faculty and TA Support, Updates for Web pages related to Undergraduate Programming, Develop Print Materials, Represent Department and College at some functions, Representative on Department, College, and University committees, etc.; other duties as assigned. (2) Providing information, either requested or that I discover, and then providing it to faculty, staff, students, and the public to assist in their daily work: teaching or research or life.	30%
I am responsible for research related to information/cyber strategy development and for special courses on information policy, management, and security.	70%

(1) Responsible for coordinating the collection and maintenance of biodiversity data for Texas and Mexico, and using GIS and species distribution modeling software to analyze the biodiversity data (Sarkar Lab). Conducting literature searches and meta-analyses of ecosystem services and farmer livelihoods in tropical agroecosystems (Jha Lab). (2) Documenting and organizing research procedures and data manipulation/analysis so that other research staff can use my protocols for similar work.	75%
Manage all elements of a research project designed to improve secondary English instruction for struggling students or students with learning disabilities.	100%
(1) Implement educational research studies exploring the efficacy of interventions designed to improve reading outcomes for students in grades 4 - 12. (2) Recruiting of participants	100%
My primary responsibility is the management and support of graduate, postdoctoral, and undergraduate training programs. I assist individual graduate students and postdoctoral fellows with pre and post-doctoral grant proposals and awards. With another staff member, I oversee the coordination of proposal preparation and grants management.	100%
Development	
(1) To raise major gifts for the Lozano Long Institute for Latin American Studies and the Benson Latin American Collection. (2) Researching and implementing a Multicultural Philanthropy effort on campus to raise the participation of alumni of color on campus. I also promote all aspects of UT to potential supporters and donors.	5%
Grants	
I assist faculty researchers in preparing funding applications to extramural sources. I do prospect funding. technical writing and editing, budgeting and compliance.	50%
(1) Provide administrative assistance to faculty and departmental researchers regarding grants, contracts, fellowships and cooperative agreements. Duties require negotiation with sponsor (federal, state, local, private) agreements and assisting faculty in all aspects of post-award research administration, such as budget preparation and set-up, negotiation of unacceptable terms, non-funded extensions of time, etc. (2) Served on internal working group at UT Austin for effort certification on sponsored activities. I'm also involved in the National Council of University Research Administrators (NCURA) and served as Volunteer Coordinator (2009 - 2010) and Treasurer from 2010 - 2012.	100%
Information Technology	
(1) I am a data manager, providing administrators and program evaluators with access to biographical and longitudinal data on students and their performance. (2) Provide data for analysis.	10%
(1) Coordinating and planning data collection activities for more than 30 top tier universities. Designing and implementing data analysis. Designing and implementing program evaluation processes. (2) Currently pulling together a team to figure out how we can tie K-12 student outcomes to the preparation programs.	40%
(1) Provide research and technical development on University contracts funded by US Army. We do research for the Army. Mentor graduate students who support the work. (2) Mentoring graduate students.	90%
Medical	
(1) Clinic Nurse, triage phone calls from patients, assist with intake and discharge of patients, oversee the volunteer program at our clinic. (2) measure, weigh, translate.	5%
(1) Head Team Physician for University of Texas Athletics. I provide in house medical care to the NCAA athletes and coverage for events. (2) Thinking of research projects that we could design and collect data for.	5%
My Title Is Not Listed	
(1) I do research on projects that the lab receives funding for, including molecular assays and animal husbandry. I currently am working on two separate research projects. I act as lab manager, making sure the lab is running smoothly by having our waste picked up, pipettes are calibrated, and organizing/making sure supplies are ordered for the lab. (2) I offer my assistance to projects all around the lab in order to help speed up the project, but also to advance my own knowledge of the subjects we research here.	90%
I am a researcher in air quality and perform (PI status) independent research and collaborate with others as well. I am also the Associate Director of our research center and oversee the administrative and managerial functions of the center.	95%

Student Administrator	
(1) Academic Advisor for the College of Liberal Arts. Coordinator of the UTurn program (an academic support program for students on probation. (2) In the process of developing a research course for undergraduate students.	5%
(1) I work with Advise TX, as a college adviser and I am stationed at Jack Yates High School in Houston, Texas, where I assist at-risk high school students, at a high school which has been identified to have an inadequate sense of a college-going culture. I work with 9-12th graders and help them with all aspects of post-secondary education. For instance, I assist with everything from finding their best fit school, registering them and helping them to prepare for the SAT and/or ACT test, help with completing scholarships and FAFSA applications, and offer advice in regards to developing their degree plans and preparedness for college. (2) Every part of my job will contribute to the mission of research, in some way or another, because our data is evaluated to see if we are indeed making a difference in developing a college-going, college-ready culture.	30%
Service Teaching	
(1) LUCHA Program Interim Director (see www.utlucha.org). I oversee the operations of the LUCHA program at K-16 Ed. Center. Some of my job tasks are: maintain a business relationships with Mexican official agencies and course providers in Mexico, oversee the curricula comparison between Mexico and Texas, train school districts in the use of the LUCHA services and other services at the K16 Education Center. (2) I actively promote the program to researchers to try to interest them in researching the program. I try to recruit graduate students to research our program or to study their doctorate in UT researching similar topics to our LUCHA program.	5%
Communication/Media	
Design and produce graphic materials for print and electronic media for both academic support and marketing. Photograph select events and functions and maintain a comprehensive photo archive.	5%
(1) I manage a team of student bloggers while maintaining and creating social marketing campaigns. I do daily content creation and website fixes. I am in charge of all print materials, press releases, and community networking. (2) With press releases and regular updates on research and advances I help present the esoteric to the general public.	15%
I principally edit engineering research and process it for publication. I also compose and edit the organization's communications with members, the media, and the public. I also act as liaison between the researchers and the organization's reviewing body, communicating feedback and helping researchers understand how best to revise their work.	85%
(1) Proofreading and editing scientific and technical papers for print and electronic publication, preparing proposals and reports, and maintaining databases are day-to-day tasks. Additional duties include writing and editing marketing content for a new web site, developing in-house style guides and templates, and coaching a diverse staff of scientists and engineers in the use of those tools. Researching questions in a variety of reference sources (both online and hard copy) and applying distinct style guides to documents are also regular activities. (2) Editing and organizing research papers.	90%

Appendix J

Table 5.7: Job Duties of "Other Professional" by Job Category, Including Percentage of Time Devoted to Teaching Work.

Administrative	
(1) Assist tenured faculty member in the supervision and management of our department. Direct supervision of professional staff. Teach classes to graduate students. (2) Provide teaching support (research, guest lecturers, participating in judging competitions).	10%
(1) I train faculty on how to evolve their pedagogical approach using technology as an integrated component to enhance teaching and learning processes. I also showcase faculty members who do this extraordinarily well in a video series I produce. (2) I am involved in a lot of behind-the-scenes work that identifies low-cost, user-friendly technologies that have the potential to facilitate evidence-based teaching and learning practices. This means finding technology that will help spur human-to-human interactions, where a majority of our most memorable learning experiences occur.	50%
(1) I'm the Outreach and Volunteer Coordinator for UT Marine Science Institute and was hired by the Mission-Aransas National Estuarine Research Reserve to run the volunteer program and help with educational outreach programs and events. I also help with the Marine Education Services dept. as a naturalist on the R/V KATY. (2) I create curriculum for informal education programs held by the reserve and open to visitors and the general public. I train educational volunteers to give public tours, work on the T/V KATY, and as greeters in our educational facilities.	75%
Coordinator/Project Manager	
(1)Coordinate and plan career events in the College of Education. Assist students in their job search. (2) Provide career assistance to future teacher candidates.	5%
(1)Process research studies for university human research protection program. advise faculty, student, and staff regarding application requirements. (2) Expanding knowledge about human subjects research protection which facilitates a well-designed, properly conducted research study involving human subjects	5%
(1)Manage a federal research and education program. (2) The program I manage provides funding and resources for students. It also provides work experience for students.	5%
(1)Oversee all aspects of the Museum's education department, including outreach programs, website, and exhibits. Teach workshops to K-12 teachers about life and earth science related topics. (2) I'm in charge of the events the Museum hosts. During our events we teach the public (infants through adults) about natural history related topics. Additionally we provide tours of the Museum to people of all ages.	20%
(1)Directly advise the leadership and ethics institute (LEI) in planning, implementing, and evaluating campus-wide leadership development programs for graduate and undergraduate students. Supervise the LEI Graduate Assistant, to provide them with practical experience with student advising and leadership programs at the college level. Co-teach an upper-division course on ethical leadership development. (2) Training and educating students on time management and academic success tools and resources; connecting students to mentors; training mentors to provide resources for other students.	25%
(1)I coordinate leadership and student success programs and services for current engineering women at UT and oversee all of the retention efforts for first and second year female students in the Cockrell School of Engineering. (2) I teach a Leadership/Career Development course once a year.	40%
(1)I provide academic support coordination (writing and academic skills) for students in the Longhorn Center for Academic Excellence. I teach workshops on writing, resumes, time-management, study skills, presentation skills. I design discussion-section curriculum for our UGS 303 signature course. I also serve as a program advisor for the Longhorn Link Program, and teach GRE prep and other workshops for the McNair Scholars program.(2) Designing and grading essays, designing and grading midterm and final exams, providing useful background materials and resources to the professor of record.	50%

(1)Design and manage outreach and recruitment initiatives for the Women in Engineering Program. Develop and disseminate curriculum and best practices that engage kids in Science, Technology, Engineering and Math (STEM) through the Texas Girls Collaborative Project.(2) disseminate best practices in effective teaching for all types of learners and how to engage learners to pursue careers in STEM (science, technology, engineering and math) from diverse backgrounds	70%
(1)I develop and maintain software (and other technical solutions) for Continuing and Innovative Education. (2) I support many applications that either provide testing or self-paced courses for both K-12 students as well as college students.	5%
(1)To manage instructional and research technology projects. To secure external grant funding for these projects and other initiatives of the college. To coordinate grant related programs for research and instruction.(2) Research and disseminate best practices for using new media and technology in the classroom	15%
Researcher	
(1) Database and applications software development. (2) Some of my projects are used as examples in teaching.	5%
(1) Designed and instruct Arabic dual-credit program for high-school students / ●Conducted survey research on the study of critical foreign languages at 20+ universities; presented to Department of Defense and Congress in October 2012 / ●Coordinated teaching workshop of 50+ participants from over 20 universities / ●Translated official University course documents and curriculum; performed simultaneous interpretation (Arabic/English) / ●Coordinated university orientations for visiting instructors and assistants. (2) Designing curriculum	5%
(1)Operate and maintain high-resolution X-ray CT scanner; digital image processing.) (2) We give numerous tours of our research facilities to classes (both from UT and from other schools).	5%
(1)Design and conduct neuroscience research, assist in lab management, instruct/oversee graduate and undergraduate students in the lab, train new lab personnel in procedures. (2) Provide undergraduate research opportunities and teach the process of experimental research on a practical level	10%
(1)Perform research related to archaeological landscapes in Italy and Ukraine. Conduct fieldwork to collect primary documentation. Write proposals and reports to granting agencies. Write articles, present results at conferences, and perform editorial work as needed in support of faculty and research staff. Manage archive of primary and secondary documentation. Train staff and students in GIS and remote sensing software and fieldwork. (2) I support faculty in research and dissemination of results. I personally advance the mission through training in practical skills and methods with a strong theoretical background.	20%
(1)I am a senior researcher in a research laboratory. I perform experiments and also give guidance to undergraduates, graduate students, post-docs and other lab staff. I also prepare manuscripts, assist in the writing of grants, review manuscripts for journals and give presentations at meetings. (2) I train students and staff in the lab on how to design and carry out experiments. I sometimes help them develop their research plan. I help with written and oral presentation of their data.	20%
(1)Conduct research in water resources engineering and geophysics. Teach workshops to research sponsors or regional groups to demonstrate how to apply our research. Guide graduate students within our research team. (2) Development of training materials that demonstrate how to use our research. Materials are freely available online.	30%
(1)Recruit, train, and manage Blanton Museum of Art docents. Help with interpretation of the permanent collection and special exhibitions at the Blanton. Manage UT programming, including tours for UT classes, events for UT students to encourage participation at the Blanton. (2) Have become very involved with the signature course staff and faculty to increase interdisciplinary teaching at the museum.	50%
(1)Develop curriculum for a high school/UT dual enrollment course. Interface with partnering institutions. (2) Bring to bear the experience of K-12 teaching to the discussion re: dual credit courses at UT.	80%
Student Administrators	
(1) Provide academic advising to students in the College of Communication, track and certify students of a certain major toward graduation. Participate and coordinate events to facilitate students who wish to be a Comm major. (2) Assist first-year students in their study skills for them to be more prepared for the classroom.	5%
(1)Consult with teachers at UT-University Charter School about how to manage serious disruptive behaviors in their classrooms. (2) I provide technical support to teachers working with high-risk youth in public school settings.	5%

(1) Coordinate assistive technology needs for students, faculty and staff who have disabilities. Provide testing accommodations for students who are unable to take exams in a regular classroom environment. (2) Providing services that allow blind students the ability to read their text books, deaf students the ability to get lecture in text formats, students with dyslexia to get their text in voice formats.	10%
(1)I counsel students on academic options, academic skill building, and College of Liberal Arts Policies. I also participate in projects such as publications, planning orientation, programs for students on probation, and any other program that our Dean comes up with or wants implemented. (2) I counsel students on the skills necessary to be a successful college student, as well as help them to learn how to navigate UT. I would consider academic advising a way of teaching students the basics that they need to have success as a UT student in and out of the classroom.	10%
(1)I advised undergrad students in the College of Liberal Arts in the Dean's Office. I specifically see undeclared, IRG, AAS, MES, ARA, HEB, ISL, TUR majors for specific advising. All other students I see are for general academic and non-academic issues. I assist when necessary in as teacher of record when asked for undergrad courses, specifically FIGs.	10%
(1)Increase college enrollment and retention of low income, first generation, and underrepresented students by serving full time in a high needs high school as a college Adviser. (2) Inform high school students, staff, and teachers of pathways and roadblocks to higher education.	15%
(1)Provide career coaching services to students in the College of Natural Sciences. Provide advising to students in all colleges around Health Professions. Conduct workshops on a variety of career related topics. (2) Conduct job search teams to help students secure positions after graduation.	20%
(1)Senior Academic Advisor advising undergraduates on their majors and degree plans. (2) I help with curriculum design.	25%
(1)Advise sorority and fraternity councils, organizations, and members. Provide leadership development, social justice, and values-based guidance in communicating and working with students, advisors, and stakeholders. (2) Connecting the dots between in class and out of class experiences within higher education institutions	35%
(1)I coordinate a mentor academy within a college and also coordinate student employee training across the college. Additionally I teach two undergraduate writing courses at a 0% appointment.(2) Provide feedback to instructors, and faculty chairs in different departments about teaching styles that are more conducive to student learning	60%
(1)Working at a high school in Texas helping seniors with the college application process. Starting a college-going culture at the high school. (2) I encourage and help high school seniors to continue their education by going to college.	70%
Service Teaching	
(1)I teach middle school boys, grades 5-8. The subjects I teach are Social Studies and English. (2) My role as a teacher makes me a role model for my students who may teach in the future.	50%
(1)Provide professional development to High School teachers and leaders and conduct research/development work at the Dana Center. (2) My work helps improve teaching at the high school level.	65%
(1)Teach math to middle and high school students at a residential treatment center. Provide instruction to these students. (2) Research and development activities online.	80%
(1)I teach high school students Chemistry and Physics at the University Charter School. (2) I tutor students outside of the students I serve	100%
(1)I teach 5th grade Language Arts and Social Studies at UTES. (2) I am a demonstration teacher, blogger, co-author of articles, the subject of research and observation from University staff and faculty, I present at national, state, and local conferences, and teach/train professionals, and pre-service teachers as a paid presenter and also volunteer as a guest speaker in undergraduate and graduate education classes. I also blog about my teaching and use social media to share my experiences.	100%
Communication/Media	
(1)Manage web and print publications for undergraduate language program. Produce language learning materials for web publication. Provide desktop and classroom technology support for faculty. (2) I prepare material (particularly video, audio, and scanned texts) for use in classroom teaching.	10%

Appendix K

Table 5.9: Job Duties of "Other Professional" by Job Category, Including Percentage of Time Devoted to Teaching Work.

Administrative	
(1) Provide oversight of the Dean's Office staff and functions. Provide administrative support for the Dean of the College. Work with faculty on reviews and promotion and tenure. (2) Organize/executive College events welcoming students to campus i.e. Explore UT	5%
(1) Coordinate a team that provides support to faculty in the College of Education on the use of technology in teaching and learning. Oversee student classroom training related to technology in teaching and learning. Coordinate College initiatives related to the use of learning technologies. (2) Some of the collaboration we have with K-12 schools focuses on improving children's literacy and/or likelihood to advance to higher education settings.	5%
(1)Plan and execute conferences, training workshops, lecture series, special events and graduate school graduation ceremonies. Handle graduate student employment issues, lead for Ethics and Responsible conduct of Research and 098T training for graduate students. Liaison to Graduate School for Graduate Coordinators and Advisers. (2) The Graduate School sponsors a lecture series in which we bring in prominent speakers and the presentations are free and open to the public. Over the past couple years, this has included John Coetzee, who graduated from UT and won the Nobel Prize in literature and Barbara Smith Conrad, who entered UT in 1956, the first year in which African American students were admitted. She was involved in a very large discrimination controversy while on campus but persevered and went on to be a successful opera singer.	25%
(1) Provide technical assistance and training for families who have children with disabilities. (2) work with families of children with disabilities in the following areas: / provide resources and information, provide technical assistance in ARD meetings; work with military families who have children with disabilities	95%
Coordinator/Project Manager	
(1) Plan and implement space education programs and opportunities for K-14 teachers and students. (2) Weekend hours at public events and venues to promote space education.	5%
(1) Direct professional development (continuing education) for the School of Social Work. (2) Providing training to foster parents in Central Texas; providing training and continuing education that promotes effectiveness of human service professionals in many public service sectors - education, mental health, additions recovery, military social work, gerontology, public policy, etc.	20%
(1)Manage all of the operation logistics and day to day management of an exhibition space on campus. Work with artists, students, and faculty to curate art exhibitions. (2) Work on a series of exhibitions and public programs that serve the university and Austin community	25%
(1) Manage a federal research and education program. (2) Work with local communities to educate them about how to better manage their coastal environment.	30%
(1) Design and manage outreach and recruitment initiatives for the Women in Engineering Program. Develop and disseminate curriculum and best practices that engage kids in Science, Technology, Engineering and Math (STEM) through the Texas Girls Collaborative Project. (2) Sharing information with parents, teachers, etc. about best practices and what they can do outside the classroom to promote STEM	30%
(1) Program a Latin American, inter-disciplinary performing arts series at Texas Performing Arts; Facilitated cultural exchange projects between UT students & faculty and performing arts collaborators in Latin America; Create campus & community engagement activities to connect audiences on & off campus to performing artists and events. (2) Create unique performing arts experiences for the on-campus & off-campus publics, as well as opportunities for those two communities to engage	60%
(1) Facilitate the recruiting process for employers who want to hire students. (2) Establishing good working relationships with employers who hire our students for summer internships, co-op positions, and full-time jobs upon graduation. My work helps people find jobs.	100%
(1) Book artists for Texas Performing Arts annual season of music, dance, theatre. (2) I'm part of an organization with a mission to serve the public by presenting cultural opportunities for campus and community. My actual tasks are to secure the artists through scheduling and negotiation, and to see the engagement through from beginning to end, including performance and non-performance (educational and promotional) activities.	100%

(1) Provide consultation and technical assistance to public school districts pertaining to educating students in homeless situations. Provide grant oversight, district and ESC training, community outreach and training and collaborative activities on a state, regional and national level.	100%
Development	
(1) Serve as the major gift officer for the Department of Art and Art History. Maintain a portfolio of major gift prospects and cultivate and solicit donations to the department. Oversee the development operations and strategy for the department including special events, foundation and corporate support. (2) Work closely with donors and others in the community to educate the public on the importance of arts and arts education. Promote the activity of the department and connect the public back to these activities.	25%
Information Technology	
(1) Design, develop, and administer websites. Provide support for internal and external users of the sites. (2) The websites that I manage contain a good deal of research and learning tools produced under the College of Education - this information is available for the public.	50%
(1) Coordinating and planning data collection activities for more than 30 top tier universities. Designing and implementing data analysis. Designing and implementing program evaluation processes. (2) We are responsible for helping universities across the nation replicate a successful program which helps fill the need for highly qualified math and science teachers.	100%
My title is not listed	
(1) Direct the academic program for the University Interscholastic League. Plan, supervise, administer and evaluate state meet for all academic events. Supervise personnel assigned to direct state academic, theatre, speech, and journalism contests. (2) Workshops, conferences, daily interaction that connects competition to daily school work.	50%
Direct IV-E stipend program, supervise students in field placement at child protective service, teach child abuse course	50%
Preservation	
(1) Develop the Benson collection by making acquisitions, digital information decisions and providing collection development services related to Caribbean research and teaching. Consult with faculty on assignment design to integrate Latin American/U.S. Latino resources. Teach seminars to undergraduates and graduate students on how to do research in general. Act as liaison between Benson and UT community, keeping community informed of events and announcements related to library's public services. (2) My library, the Benson Latin American Collection, is an archive of record for materials related to Latin America and Latinos in the United States. Everything we do is to make this information available both to academia and to the general public, and important to both constituencies.	10%
(1) Manage the acquisition of new collection materials; provide critical support for the daily administration of the Ransom Center; enhance the contemporary literature collections through acquisitions and interpret the collections through the preparation of exhibitions, publications, and programming; assist in development efforts; communicate regularly with authors, booksellers, and literary estates. (2) Curate public exhibitions, speak publicly about collections	10%
(1) Curate + run the University Co-op Materials Resource Center for the School of Architecture at UT. Investigate new + innovative materials; relay that information to faculty + students at UTSoA. Serve as a conduit between academia + the construction/manufacturing industry. (2) Host exhibits + workshops that invite local professionals + general public to participate + attend	25%
(1) Conduct research, publish, curate exhibition and assist in administration and development of collections and departments. Provide assistance in teaching and scholarly research. (2) Teach patrons and others. Lecture to various classes and groups or individuals. Assist patrons, general public, classes, groups and other faculty in finding materials to assist in their research. Guest teaching/lecturing. Promote my own research as well as that of the institution for which I work. Directly assist in inquiries regarding access, use and research with the holdings of our institution.	35%

(1) I manage the Center for Transportation Research Library. I am responsible for the administration of the library. I also provide reference services to our university, TxDOT and public patrons. I network with other transportation librarians on the local, state and national level. (2) Part of the mission of our Center is to serve the public through research that responds to the transportation needs of Texas travelers. I advance this mission through reference assistance to public patrons - our library is open to the public. We also maintain a web catalog of all of our holdings, which is accessible to the public. Nearly 50% of our holdings - over 10,000 items are available in a pdf, which are available to the public for download or printing. It is my responsibility to ensure that the results of our research are available freely to the public. We act as the Research Library for the Texas Department of Transportation.	75%
(1) Establish and implement library/archive/artifact resource management systems, including cataloging, inventorying, circulation, and usage. Provide reference assistance to researchers, faculty and students. (2) I work to make the resources we have available to the public in a manner that suits all levels of education and understanding. I create displays and give presentations that explain our resources and encourage the public to use these resources to increase their understanding of the world around them.	90%
Research	
(1) Director of visualization. Provide vision, direction and guidance to a group of 10 full time staff. Do research in visualization related fields. Teach a course in SSC every fall. (2) Outreach to underserved populations to tell them about advanced computing, specifically visualization, and opportunities in this field. Primary work has been to encourage young women to stay in STEM related fields.	5%
(1) Coordinate chemistry demonstrations for undergraduate classes and visiting groups. Includes planning, buying, preparing, presenting demos. (2) I perform and prepare chemistry circuses (shows) to visiting groups to interest them in chemistry and science and higher education. Some of these shows have been to groups that fund raise/provide scholarships (St. David's), prospective students, elementary through high school groups, parents, teacher groups, science teachers, boy/girl scouts, Jack and Jill groups (black parents and their children), regional American Chemical Society meetings, Austin Children's museum camps, Explore UT, CNS Family Day, and others. I also prepare materials for student groups (undergrads and grad students), professors, and lecturers who are performing science outreach and these are as varied as above and also include day care groups, low income housing after school programs, Earth Day events, etc.	5%
(1) Coordinate activities for a workgroup that supports the State of Texas during emergency events caused by natural hazards. Conduct research in geospatial technologies and applications. My group supports the State of Texas during significant emergencies such as hurricanes, wildfires and other natural hazard events.	50%
(1) I facilitate organizational change processes in participating public health organizations. I also collect process and other evaluation data on projects with organizational partners. (2) The mission of our work is to transform the public mental health system. We work with mental health professionals and consumers to promote recovery-oriented environments and services within the behavioral health care system. As partners we try to also educate the public and community partners about the reality of recovery with mental illness and the possibility of a community in which people in recovery can belong, contribute, and be supported on their journeys.	80%
(1) Manage most of the day to day tasks of the Fishes of TX project. Project aim is to database museum collection of TX fishes and acquire ancillary items such as field notes and images.	100%
Student Administrator	
(1) Recruit students for undergrad and grad program. Run Summer Research Internship program. Serve as a communication hub for departmental contacts and recruits. Coordinate all aspects of recruiting program, including events, outreach, travel, and communications. (2) I collaborate with groups that seek to diversify the engineering profession, so I conduct outreach to women, as well as Black and Hispanic students. I also work with first-generation prospects. In general, one of my goals is to talk to students about engineering and grad school particularly when they have not been previously exposed to that opportunity. In that sense, a part of my job is increasing educational opportunities for people	5%
(1) I provide support and advising to students and parents of students enrolled in courses and exams through the K-16 Education Center, as well as students enrolled in the UT High School Diploma Program. I also coordinate between K-16 and other state agencies (CPA and DRS-DHHS) in relation to certification exams that are contracted through our center. (2) I often provide basic college counseling to our students, or help students to come to a decision on what educational path might most effectively help them to reach their goals.	75%

(1) Help students in the college application process, assist with financial aid, coordinate university representative visits, supervise college tours, and work with parents. I am employed by the university, but I currently work in a high school in south Texas.(2) I mentor students for life after high school, present to underclassmen on how they can prepare for their senior year, and I coordinate volunteer activities with my high school mentors.	75%
(1) I provide academic advisement and registrar services for the 350 FT high school students in the University's high school program. (2) Community outreach, web-work & conference attendance to get the word out about our programs & services	90%
(1) Provide college admissions and financial aid advice to Lanier High School students. I work full-time at Lanier High School and assist students in applying to any school, not just the University of Texas at Austin. (2) My entire job is public service-- promoting higher education and helping students to get to higher education and succeed once they are there.	100%
(1) Working at a high school in Texas helping seniors with the college application process. Starting a college-going culture at the high school. (2) Act as more of a therapist than a college adviser. Students talk about personal/family issues and I spend time talking them through it.	100%
Service Teaching	
(1) I am a literacy and communication specialist. I provide speech-language therapy and reading intervention to preschool and elementary students. (2) Our school is very involved in helping students become active, productive members of the community and this involves public service projects. Our students raise money for Red Cross Fire Relief, Walk for Water, and Hunger Relief. We donate blood every year. We also raise vegetables in our garden and offer cooking demonstrations for the community involved with our Healthy Families Initiative. As faculty, I work along with the children and their families as a mentor and model of citizenship for the next generation.	20%
(1) I am a content specialist with the Institute for Public School Initiatives with the University of Texas' College of Education. Currently I am working on developing content for Project Share: On TRACK. (2) The work that I do will improve educational outcomes for public school students, will improve the teaching profession, and will ultimately improve society as a whole.	100%
(1) Assist public and charter middle schools in the implementation of the Algebra Readiness grant which increases student preparedness for Algebra standards and assessments. (2) I feel working with the coaches to assist the teachers to provide a good educational environment is part of public service.	100%
Communications/Media	
(1) Help prepare research or promotional materials: provide copy; edit copy; provide photograph and graphics as needed; provide graphic layout. Follow project from concept to finish. Sometimes work with a team, and sometimes work as a team of one. High attention is given to communicating data in the most effective manner. Interface with outside printers as needed. (2) The regional economic development mission of the institute is often fulfilled by delivery of the materials I help create. The "summary and end product" of our research has often gone across my desk; sometimes with high input by me.	30%
(1) Manage web and print publications for undergraduate language program. Produce language learning materials for web publication. Provide desktop and classroom technology support for faculty. (2) Help produce and publish language-learning podcasts and various other language learning resources that are made available free to the general public.	40%

REFERENCES

About IPEDS. (n.d.). *Integrated Postsecondary Education Data System*. Retrieved August 15, 2011, from National Center for Education Statistics website: http://nces.ed.gov/ipeds/about/

Altshuler, J.S., & Altshuler, D (2004). Organizational challenges in clinical genomic research, *Nature*, 429, 478-81.

Birnbaum, Robert (1988). *How colleges work: The cybernetics of academic organization and leadership*. San Francisco, CA: Jossey-Bass Publishers.

Blackburn, R. T., & Lawrence, J. H. (1995). *Faculty at work: Motivation, expectation, satisfaction*. Baltimore, MD: Johns Hopkins University Press.

Bok, D. C. (1982). *Beyond the ivory tower: Social responsibilities of the modern university*. Cambridge, MA: Harvard University Press.

Brannick, M. T., Levine, E. L., & Morgeson, F. P. (2007). *Job and work analysis methods, research, and applications for human resource management* (2nd ed.). Los Angeles, CA: Sage Publications.

Calhoun, C. (2011). The public mission of the research university. In D. Rhotten & C. Calhoun (Eds.), *Knowledge matters the public mission of the research university* (pp. 1-33). New York: Columbia University Press.

The Carnegie Foundation for the Advancement of Teaching (2011). Carnegie Classifications, University of Texas at Austin. Available at http://carnegiefoundation.org/classifications/sub.asp?key=748&subkey=16431&start=782.

Coaldrake, Peter, & Stedman, Lawrence R. (1999) Academic work in the twenty-first century : changing roles and policies. Dept. of Education, Training and Youth Affairs, Canberra.

Committee on Science, Engineering, and Public Policy (2000). *Enhancing the postdoctoral experience for scientists and engineers*. Washington, DC: National Academy Press.

Geiger, R. L. (1986). *The growth of American research universities, 1900-1940: To advance knowledge*. New York: Oxford University Press.

Gibbons, Michael; Camille Limoges, Helga Nowotny, Simon Schwartzman, Peter Scott, & Martin Trow (1994). *The new production of knowledge: the dynamics of science and research in contemporary societies*. London: Sage. ISBN 0-8039-7794-8.

Goldwater Institute Who we are. (2011). *Goldwater Institute*. Retrieved November 11, from Goldwater Institute website: http://goldwaterinstitute.org/who-we-are.

Greene, J. P., Kisida, B., & Mills, J. (2010, August 17). *Administrative bloat at American universities: The real reason for high costs in higher education* (Rep. Policy Report No. 239). Retrieved from Goldwater Institute website: http://www.goldwaterinstitute.org/file/4942/download/4944.

Groccia, J.E. (2012). A model for understanding university teaching and learning. In Groccia, J. E., Alsudairi, M. A. T., Buskist, W. (Eds.), *Handbook of college and university teaching a global perspective* (pp. 2-13). Los Angeles, CA: Sage.

The Integrated Postsecondary Education Data System-Glossary. (n.d.). Retrieved May 19, 2012, from National Center for Education Statistics website: http://nces.ed.gov/ipeds/glossary/?charindex=O.

Kane, K.L. (2007). University academic professional staff: Augmenting traditional faculty teaching, advising, and research roles. Ph.D. Dissertation, Iowa State University, Ames.

Kerr, C. (2001). *The uses of the university* (5th ed.). Cambridge, Massachusetts: Harvard University Press. (Original work published 1963)

Lewis, D. R., and Hearn, J. (Eds.). (2003). *The Public Research University: Serving the Public Good in New Times*. Lanham, MD: University Press of America.

Lozar Manfreda, K., M. Bosnjak, J. Berzelak, I. Haas and V. Vehovar. 2008. Web surveys versus other survey modes; a meta-analysis comparing response rates. *International Journal of Market Research* 50(1): 79–104.

McMahon, W. W. (2009). *Higher learning, greater good: The private and social benefits of higher education*. Baltimore, MD: Johns Hopkins University Press.

Miles, M. & Huberman, A. (1994). *Qualitative data analysis*. Thousand Oaks: Sage.

Miner, A. S., & Estler, S. E. (1985, March/April). Accrual mobility: job mobility in higher education through responsibility accrual. *The Journal of Higher Education, 56*(2), 121-33.

Mintzberg, H., (1979). *The structuring of organizations: A synthesis of the research.* Englewood Cliffs, NJ: Prentice-Hall.

Mintzberg, H. (1993) *Structure in fives: Designing effective organizations*. Englewood Cliffs, NJ: Prentice-Hall.

NCES About us. (n.d.). *National Center for Education Statistics*. Retrieved August 15, 2011, from National Center for Education Statistics website: http://nces.ed.gov/about.

Renault, C. S. (2006, March). Academic capitalism and university incentives for faculty entrepreneurship. *Journal of Technology Transfer, 31*(2), 227-239. doi:10.1007/s10961-005-6108-x

Rhoades, G. (1998) Reviewing and Rethinking Administrative Costs. In J. C. Smart (ed.),

Higher Education Handbook of Theory and Research (pp.111-147). 13(13), NewYork: Agathon Press.

Rhoades, G. (2006). The higher education we choose: A question of balance. [Electronic version]. *The Review of Higher Education,* 29(3), 381-404. doi: 10.1353/rhe.2006.0015

Rhoades, G. (2007). Technology-enhanced courses and a mode III - Organization of instructional work. *Tertiary Education and Management*, 13(1), 1. doi: 10.1080/13583880601145496.

Rhoades, G., Kiyama, J. M., McCormick, R., & Quiroz, M. (2008). Local cosmopolitans and cosmopolitan locals: New models of professionals in the academy. [Electronic version]. *The Review of Higher Education.* 31(2), 209-35.

Rhoten, D., & Powell, W. (2011). Public research universities: From land grant to patent grant institutions. In Rhoten, D., & Calhoun, C. (Eds.), *Knowledge matters: The public mission of the research university* (pp. 315-341). New York, NY: Columbia University Press.

Rizzo, M. J., (2006). State preferences for higher education spending: A panel data analysis, 1977-2001. In Ehrenberg, R., (Ed). *What's happening to public higher education* (pp. 3-36) Westport, CT: Praeger.

Rosser, V. J., & Tabata, L. N. (2010). An examination of faculty work: Conceptual and theoretical frameworks in the literature. In J. C. Smart (Ed.), *Higher Education: Handbook of Theory and Research* (Vol. 21, pp. 449-75). doi:10.1007/978-90-481-8598-6_12.

Siggelkow, N. (2002, March). Evolution toward fit. *Administrative Science Quarterly, 47*(1), 125-59.

Slaughter, S., & Rhoades, G. (2004). *Academic capitalism and the new economy: Markets, state, and higher education.* Baltimore, MD: The Johns Hopkins University Press.

Sherwood, J. E. (2004). The role of the land-grant institution in the 21st century [Monograph]. *CSHE Research & Occasional Paper Series*, (6.04). Retrieved from http://cshe.berkeley.edu/publications/docs/ROP.Sherwood.6.04.pdf.

Snyder, T.D., and Dillow, S.A. (2011). *Digest of Education Statistics 2010* (NCES 2011-015). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Terpstra, D. E., & Honoree, A. L. (2009). The effects of different teaching, research, and service emphases on individual and organizational outcomes in higher education institutions. *Journal of Education for Business*, 84(3), 169-176. Retrieved from EBSCOhost.

UC Davis responds to Goldwater Institute report. (2010, August 27). Retrieved November 5, 2010, from http://dateline.ucdavis.edu/dl_detail.lasso?id=12905.

U.S. Bureau of Labor Statistics. (February, 2010). 2010 *SOC user guide*. Retrieved December 4, 2012, from http://www.bls.gov/soc/soc_2010_user_guide.pdf.